wwPDB EM Validation Summary Report

May 19, 2025 – 04:24 PM JST

PDB ID	:	9KC5 / pdb_00009kc5
EMDB ID	:	EMD-62242
Title	:	PSI-LHCI of the red alga Galdieria sulphuraria NIES-3638
Authors	:	Kato, K.; Nakajima, Y.; Shen, J.R.; Nagao, R.
Deposited on	:	2024-11-01
Resolution	:	2.19 Å(reported)
Based on initial model	:	.

This is a wwPDB EM Validation Summary Report for a publicly released PDB entry.

We welcome your comments at *validation@mail.wwpdb.org*
A user guide is available at
https://www.wwpdb.org/validation/2017/EMValidationReportHelp
with specific help available everywhere you see the ⓘ symbol.

The types of validation reports are described at
http://www.wwpdb.org/validation/2017/FAQs#types.

The following versions of software and data (see references ⓘ) were used in the production of this report:

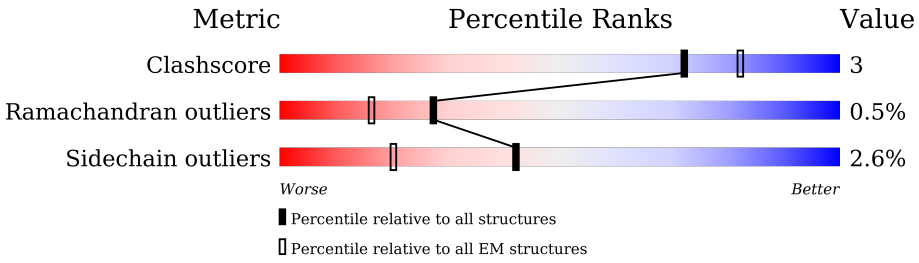
EMDB validation analysis	:	0.0.1.dev118
Mogul	:	1.8.5 (274361), CSD as541be (2020)
MolProbity	:	4-5-2 with Phenix2.0rc1
buster-report	:	1.1.7 (2018)
Percentile statistics	:	20231227.v01 (using entries in the PDB archive December 27th 2023)
MapQ	:	1.9.13
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.43.1

1 Overall quality at a glance (i)

The following experimental techniques were used to determine the structure:
ELECTRON MICROSCOPY

The reported resolution of this entry is 2.19 Å.

Percentile scores (ranging between 0-100) for global validation metrics of the entry are shown in the following graphic. The table shows the number of entries on which the scores are based.



Metric	Whole archive (#Entries)	EM structures (#Entries)
Clashscore	210492	15764
Ramachandran outliers	207382	16835
Sidechain outliers	206894	16415

The table below summarises the geometric issues observed across the polymeric chains and their fit to the map. The red, orange, yellow and green segments of the bar indicate the fraction of residues that contain outliers for >=3, 2, 1 and 0 types of geometric quality criteria respectively. A grey segment represents the fraction of residues that are not modelled. The numeric value for each fraction is indicated below the corresponding segment, with a dot representing fractions <=5% The upper red bar (where present) indicates the fraction of residues that have poor fit to the EM map (all-atom inclusion < 40%). The numeric value is given above the bar.

Mol	Chain	Length	Quality of chain
1	A	739	95%
2	B	732	96%
3	C	80	96%
4	D	138	93% 7%
5	E	64	5% 94% 6%
6	F	161	93% 7%
7	I	34	97%
8	J	42	90% 10%

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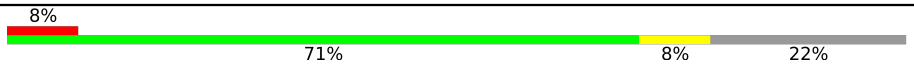
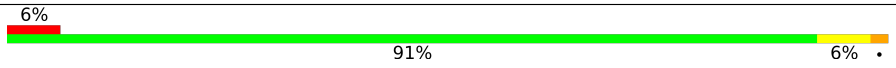
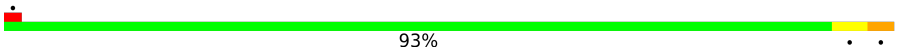
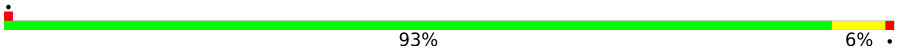
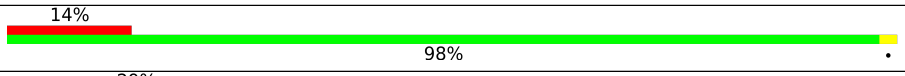
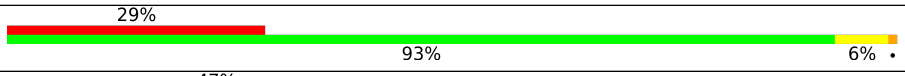
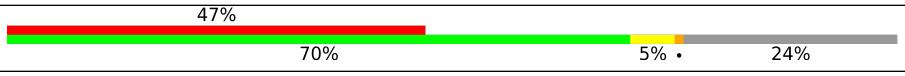
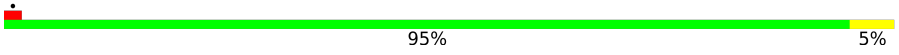
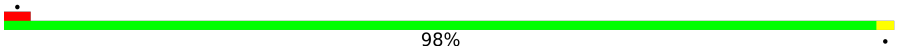
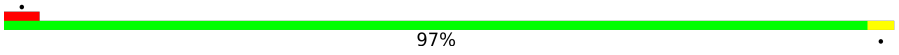
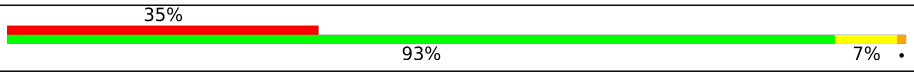
Mol	Chain	Length	Quality of chain
9	K	65	
10	L	139	
11	M	28	
12	O	95	
13	Z	84	
14	1	177	
15	2	162	
16	3	131	
17	4	178	
18	5	178	
19	6	178	
20	7	168	

The following table lists non-polymeric compounds, carbohydrate monomers and non-standard residues in protein, DNA, RNA chains that are outliers for geometric or electron-density-fit criteria:

Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
21	CL0	A	801	X	-	-	-
22	CLA	1	302	X	-	-	-
22	CLA	1	303	X	-	-	-
22	CLA	1	304	X	-	-	-
22	CLA	1	305	X	-	-	-
22	CLA	1	306	X	-	-	-
22	CLA	1	308	X	-	-	-
22	CLA	1	309	X	-	-	-
22	CLA	1	310	X	-	-	-
22	CLA	2	302	X	-	-	-
22	CLA	2	303	X	-	-	-
22	CLA	2	304	X	-	-	-
22	CLA	2	306	X	-	-	-
22	CLA	2	307	X	-	-	-
22	CLA	2	308	X	-	-	-
22	CLA	2	309	X	-	-	-
22	CLA	2	310	X	-	-	-

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Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
22	CLA	2	311	X	-	-	-
22	CLA	3	301	X	-	-	-
22	CLA	3	302	X	-	-	-
22	CLA	3	303	X	-	-	-
22	CLA	3	304	X	-	-	-
22	CLA	3	305	X	-	-	-
22	CLA	4	302	X	-	-	-
22	CLA	4	303	X	-	-	-
22	CLA	4	304	X	-	-	-
22	CLA	4	305	X	-	-	-
22	CLA	4	306	X	-	-	-
22	CLA	4	307	X	-	-	-
22	CLA	4	308	X	-	-	-
22	CLA	4	309	X	-	-	-
22	CLA	4	310	X	-	-	-
22	CLA	4	311	X	-	-	-
22	CLA	4	312	X	-	-	-
22	CLA	5	301	X	-	-	-
22	CLA	5	302	X	-	-	-
22	CLA	5	303	X	-	-	-
22	CLA	5	304	X	-	-	-
22	CLA	5	305	X	-	-	-
22	CLA	5	306	X	-	-	-
22	CLA	5	307	X	-	-	-
22	CLA	5	308	X	-	-	-
22	CLA	5	309	X	-	-	-
22	CLA	5	310	X	-	-	-
22	CLA	5	311	X	-	-	-
22	CLA	6	303	X	-	-	-
22	CLA	6	304	X	-	-	-
22	CLA	6	305	X	-	-	-
22	CLA	6	306	X	-	-	-
22	CLA	6	307	X	-	-	-
22	CLA	6	308	X	-	-	-
22	CLA	6	309	X	-	-	-
22	CLA	6	310	X	-	-	-
22	CLA	6	311	X	-	-	-
22	CLA	6	312	X	-	-	-
22	CLA	6	313	X	-	-	-
22	CLA	6	314	X	-	-	-
22	CLA	7	303	X	-	-	-
22	CLA	7	304	X	-	-	-

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Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
22	CLA	7	305	X	-	-	-
22	CLA	7	307	X	-	-	-
22	CLA	7	308	X	-	-	-
22	CLA	7	309	X	-	-	-
22	CLA	7	310	X	-	-	-
22	CLA	7	311	X	-	-	-
22	CLA	7	312	X	-	-	-
22	CLA	7	313	X	-	-	-
22	CLA	A	802	X	-	-	-
22	CLA	A	803	X	-	-	-
22	CLA	A	804	X	-	-	-
22	CLA	A	805	X	-	-	-
22	CLA	A	806	X	-	-	-
22	CLA	A	808	X	-	-	-
22	CLA	A	809	X	-	-	-
22	CLA	A	810	X	-	-	-
22	CLA	A	811	X	-	-	-
22	CLA	A	812	X	-	-	-
22	CLA	A	813	X	-	-	-
22	CLA	A	815	X	-	-	-
22	CLA	A	816	X	-	-	-
22	CLA	A	817	X	-	-	-
22	CLA	A	818	X	-	-	-
22	CLA	A	819	X	-	-	-
22	CLA	A	821	X	-	-	-
22	CLA	A	823	X	-	-	-
22	CLA	A	824	X	-	-	-
22	CLA	A	825	X	-	-	-
22	CLA	A	826	X	-	-	-
22	CLA	A	827	X	-	-	-
22	CLA	A	828	X	-	-	-
22	CLA	A	829	X	-	-	-
22	CLA	A	830	X	-	-	-
22	CLA	A	831	X	-	-	-
22	CLA	A	832	X	-	-	-
22	CLA	A	833	X	-	-	-
22	CLA	A	835	X	-	-	-
22	CLA	A	836	X	-	-	-
22	CLA	A	837	X	-	-	-
22	CLA	A	838	X	-	-	-
22	CLA	A	839	X	-	-	-
22	CLA	A	848	X	-	-	-

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Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
22	CLA	A	857	X	-	-	-
22	CLA	A	858	X	-	-	-
22	CLA	A	859	X	-	-	-
22	CLA	B	801	X	-	-	-
22	CLA	B	802	X	-	-	-
22	CLA	B	803	X	-	-	-
22	CLA	B	804	X	-	-	-
22	CLA	B	805	X	-	-	-
22	CLA	B	806	X	-	-	-
22	CLA	B	807	X	-	-	-
22	CLA	B	808	X	-	-	-
22	CLA	B	809	X	-	-	-
22	CLA	B	810	X	-	-	-
22	CLA	B	811	X	-	-	-
22	CLA	B	813	X	-	-	-
22	CLA	B	814	X	-	-	-
22	CLA	B	815	X	-	-	-
22	CLA	B	816	X	-	-	-
22	CLA	B	817	X	-	-	-
22	CLA	B	818	X	-	-	-
22	CLA	B	819	X	-	-	-
22	CLA	B	820	X	-	-	-
22	CLA	B	822	X	-	-	-
22	CLA	B	823	X	-	-	-
22	CLA	B	824	X	-	-	-
22	CLA	B	825	X	-	-	-
22	CLA	B	826	X	-	-	-
22	CLA	B	827	X	-	-	-
22	CLA	B	828	X	-	-	-
22	CLA	B	829	X	-	-	-
22	CLA	B	831	X	-	-	-
22	CLA	B	832	X	-	-	-
22	CLA	B	833	X	-	-	-
22	CLA	B	834	X	-	-	-
22	CLA	B	835	X	-	-	-
22	CLA	B	836	X	-	-	-
22	CLA	B	837	X	-	-	-
22	CLA	B	839	X	-	-	-
22	CLA	B	850	X	-	-	-
22	CLA	F	204	X	-	-	-
22	CLA	F	205	X	-	-	-
22	CLA	F	206	X	-	-	-

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Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
22	CLA	J	102	X	-	-	-
22	CLA	K	101	X	-	-	-
22	CLA	K	102	X	-	-	-
22	CLA	L	203	X	-	-	-
22	CLA	L	204	X	-	-	-
22	CLA	L	205	X	-	-	-
22	CLA	O	203	X	-	-	-
22	CLA	O	204	X	-	-	-
22	CLA	O	205	X	-	-	-
22	CLA	O	206	X	-	-	-
22	CLA	Z	201	X	-	-	-
22	CLA	Z	204	X	-	-	-
29	5X6	1	311	-	X	-	-
29	5X6	1	316	-	X	-	-
29	5X6	7	315	-	X	-	-
29	5X6	M	101	-	X	-	-

2 Entry composition (i)

There are 32 unique types of molecules in this entry. The entry contains 41435 atoms, of which 0 are hydrogens and 0 are deuteriums.

In the tables below, the AltConf column contains the number of residues with at least one atom in alternate conformation and the Trace column contains the number of residues modelled with at most 2 atoms.

- Molecule 1 is a protein called Photosystem I P700 chlorophyll a apoprotein A1.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
1	A	739	5844	3827	1001	990	26	0	0

- Molecule 2 is a protein called Photosystem I P700 chlorophyll a apoprotein A2.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
2	B	732	5859	3864	988	993	14	0	0

- Molecule 3 is a protein called Photosystem I iron-sulfur center.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
3	C	80	600	369	104	115	12	0	0

- Molecule 4 is a protein called Photosystem I reaction center subunit II.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
4	D	138	1103	706	188	205	4	0	0

- Molecule 5 is a protein called Photosystem I subunit IV.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
5	E	64	516	333	85	97	1	0	0

- Molecule 6 is a protein called Photosystem I reaction center subunit III.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
6	F	161	1285	832	216	232	5	0	0

- Molecule 7 is a protein called Photosystem I reaction center subunit VIII.

Mol	Chain	Residues	Atoms					AltConf	Trace
7	I	34	Total	C	N	O	S	0	0
			273	189	35	47	2		

- Molecule 8 is a protein called Photosystem I reaction center subunit IX.

Mol	Chain	Residues	Atoms					AltConf	Trace
8	J	42	Total	C	N	O	S	0	0
			337	230	50	56	1		

- Molecule 9 is a protein called PSI-K.

Mol	Chain	Residues	Atoms					AltConf	Trace
9	K	51	Total	C	N	O	S	0	0
			368	239	59	68	2		

- Molecule 10 is a protein called Photosystem I reaction center subunit XI.

Mol	Chain	Residues	Atoms					AltConf	Trace
10	L	139	Total	C	N	O	S	0	0
			1076	707	174	193	2		

- Molecule 11 is a protein called Photosystem I reaction center subunit XII.

Mol	Chain	Residues	Atoms					AltConf	Trace
11	M	28	Total	C	N	O	S	0	0
			214	143	34	36	1		

- Molecule 12 is a protein called Photosystem I subunit O.

Mol	Chain	Residues	Atoms					AltConf	Trace
12	O	95	Total	C	N	O	S	0	0
			748	504	115	128	1		

- Molecule 13 is a protein called Psa28.

Mol	Chain	Residues	Atoms					AltConf	Trace
13	Z	84	Total	C	N	O	S	0	0
			637	423	98	114	2		

- Molecule 14 is a protein called RedCAP.

Mol	Chain	Residues	Atoms					AltConf	Trace
14	1	177	Total	C	N	O	S	0	0
			1370	889	235	241	5		

- Molecule 15 is a protein called Light-harvesting complex protein.

Mol	Chain	Residues	Atoms					AltConf	Trace
15	2	162	Total	C	N	O	S	0	0
			1286	834	219	229	4		

- Molecule 16 is a protein called Light-harvesting complex protein.

Mol	Chain	Residues	Atoms					AltConf	Trace
16	3	99	Total	C	N	O	S	0	0
			772	508	126	132	6		

- Molecule 17 is a protein called Light-harvesting complex protein.

Mol	Chain	Residues	Atoms					AltConf	Trace
17	4	178	Total	C	N	O	S	0	0
			1407	926	233	240	8		

- Molecule 18 is a protein called Light-harvesting complex protein.

Mol	Chain	Residues	Atoms					AltConf	Trace
18	5	178	Total	C	N	O	S	0	0
			1402	912	238	245	7		

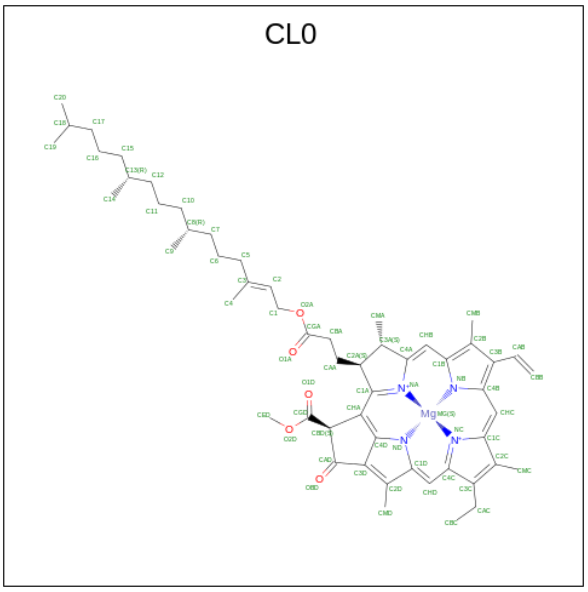
- Molecule 19 is a protein called Light-harvesting complex protein.

Mol	Chain	Residues	Atoms					AltConf	Trace
19	6	178	Total	C	N	O	S	0	0
			1450	965	235	241	9		

- Molecule 20 is a protein called Light-harvesting complex protein.

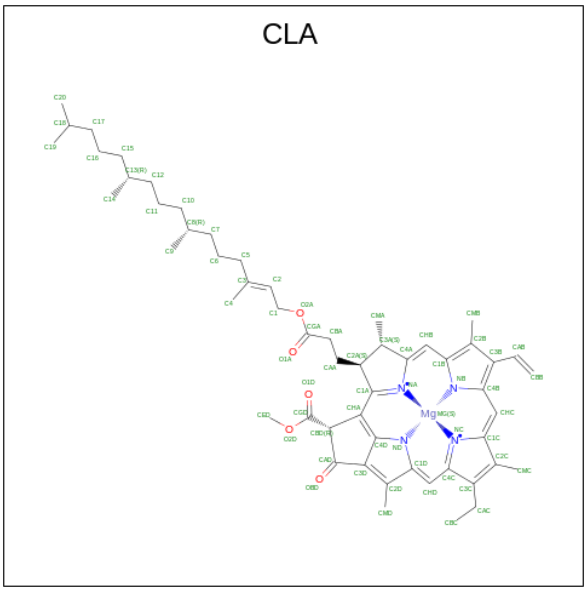
Mol	Chain	Residues	Atoms					AltConf	Trace
20	7	168	Total	C	N	O	S	0	0
			1322	860	220	234	8		

- Molecule 21 is CHLOROPHYLL A ISOMER (CCD ID: CL0) (formula: $C_{55}H_{72}MgN_4O_5$) (labeled as "Ligand of Interest" by depositor).



Mol	Chain	Residues	Atoms					AltConf
21	A	1	Total	C	Mg	N	O	0
			65	55	1	4	5	

- Molecule 22 is CHLOROPHYLL A (CCD ID: CLA) (formula: $C_{55}H_{72}MgN_4O_5$) (labeled as "Ligand of Interest" by depositor).



Mol	Chain	Residues	Atoms					AltConf
22	A	1	Total	C	Mg	N	O	0
			55	45	1	4	5	
22	A	1	Total	C	Mg	N	O	0
			65	55	1	4	5	

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Mol	Chain	Residues	Atoms					AltConf
22	A	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
22	A	1	Total	C	Mg	N	O	0
			50	40	1	4	5	
22	A	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
22	A	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
22	A	1	Total	C	Mg	N	O	0
			55	45	1	4	5	
22	A	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
22	A	1	Total	C	Mg	N	O	0
			54	44	1	4	5	
22	A	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
22	A	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
22	A	1	Total	C	Mg	N	O	0
			42	34	1	4	3	
22	A	1	Total	C	Mg	N	O	0
			45	35	1	4	5	
22	A	1	Total	C	Mg	N	O	0
			62	52	1	4	5	
22	A	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
22	A	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
22	A	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
22	A	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
22	A	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
22	A	1	Total	C	Mg	N	O	0
			45	35	1	4	5	
22	A	1	Total	C	Mg	N	O	0
			55	45	1	4	5	
22	A	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
22	A	1	Total	C	Mg	N	O	0
			55	45	1	4	5	

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Mol	Chain	Residues	Atoms					AltConf
22	A	1	Total 65	C 55	Mg 1	N 4	O 5	0
22	A	1	Total 65	C 55	Mg 1	N 4	O 5	0
22	A	1	Total 65	C 55	Mg 1	N 4	O 5	0
22	A	1	Total 65	C 55	Mg 1	N 4	O 5	0
22	A	1	Total 50	C 40	Mg 1	N 4	O 5	0
22	A	1	Total 56	C 46	Mg 1	N 4	O 5	0
22	A	1	Total 65	C 55	Mg 1	N 4	O 5	0
22	A	1	Total 65	C 55	Mg 1	N 4	O 5	0
22	A	1	Total 65	C 55	Mg 1	N 4	O 5	0
22	A	1	Total 60	C 50	Mg 1	N 4	O 5	0
22	A	1	Total 51	C 41	Mg 1	N 4	O 5	0
22	A	1	Total 56	C 46	Mg 1	N 4	O 5	0
22	A	1	Total 65	C 55	Mg 1	N 4	O 5	0
22	A	1	Total 65	C 55	Mg 1	N 4	O 5	0
22	A	1	Total 65	C 55	Mg 1	N 4	O 5	0
22	A	1	Total 65	C 55	Mg 1	N 4	O 5	0
22	A	1	Total 65	C 55	Mg 1	N 4	O 5	0
22	A	1	Total 65	C 55	Mg 1	N 4	O 5	0
22	A	1	Total 65	C 55	Mg 1	N 4	O 5	0
22	B	1	Total 65	C 55	Mg 1	N 4	O 5	0
22	B	1	Total 65	C 55	Mg 1	N 4	O 5	0

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Mol	Chain	Residues	Atoms					AltConf
22	B	1	Total 65	C 55	Mg 1	N 4	O 5	0
22	B	1	Total 65	C 55	Mg 1	N 4	O 5	0
22	B	1	Total 65	C 55	Mg 1	N 4	O 5	0
22	B	1	Total 65	C 55	Mg 1	N 4	O 5	0
22	B	1	Total 65	C 55	Mg 1	N 4	O 5	0
22	B	1	Total 65	C 55	Mg 1	N 4	O 5	0
22	B	1	Total 65	C 55	Mg 1	N 4	O 5	0
22	B	1	Total 65	C 55	Mg 1	N 4	O 5	0
22	B	1	Total 65	C 55	Mg 1	N 4	O 5	0
22	B	1	Total 55	C 45	Mg 1	N 4	O 5	0
22	B	1	Total 65	C 55	Mg 1	N 4	O 5	0
22	B	1	Total 57	C 47	Mg 1	N 4	O 5	0
22	B	1	Total 65	C 55	Mg 1	N 4	O 5	0
22	B	1	Total 65	C 55	Mg 1	N 4	O 5	0
22	B	1	Total 59	C 49	Mg 1	N 4	O 5	0
22	B	1	Total 60	C 50	Mg 1	N 4	O 5	0
22	B	1	Total 65	C 55	Mg 1	N 4	O 5	0
22	B	1	Total 45	C 35	Mg 1	N 4	O 5	0
22	B	1	Total 46	C 36	Mg 1	N 4	O 5	0
22	B	1	Total 65	C 55	Mg 1	N 4	O 5	0
22	B	1	Total 55	C 45	Mg 1	N 4	O 5	0

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Mol	Chain	Residues	Atoms					AltConf
22	B	1	Total 65	C 55	Mg 1	N 4	O 5	0
22	B	1	Total 65	C 55	Mg 1	N 4	O 5	0
22	B	1	Total 65	C 55	Mg 1	N 4	O 5	0
22	B	1	Total 65	C 55	Mg 1	N 4	O 5	0
22	B	1	Total 65	C 55	Mg 1	N 4	O 5	0
22	B	1	Total 65	C 55	Mg 1	N 4	O 5	0
22	B	1	Total 65	C 55	Mg 1	N 4	O 5	0
22	B	1	Total 65	C 55	Mg 1	N 4	O 5	0
22	B	1	Total 65	C 55	Mg 1	N 4	O 5	0
22	B	1	Total 65	C 55	Mg 1	N 4	O 5	0
22	B	1	Total 51	C 41	Mg 1	N 4	O 5	0
22	B	1	Total 65	C 55	Mg 1	N 4	O 5	0
22	B	1	Total 47	C 37	Mg 1	N 4	O 5	0
22	B	1	Total 65	C 55	Mg 1	N 4	O 5	0
22	B	1	Total 65	C 55	Mg 1	N 4	O 5	0
22	B	1	Total 65	C 55	Mg 1	N 4	O 5	0
22	B	1	Total 58	C 48	Mg 1	N 4	O 5	0
22	B	1	Total 45	C 35	Mg 1	N 4	O 5	0
22	F	1	Total 61	C 51	Mg 1	N 4	O 5	0
22	F	1	Total 45	C 35	Mg 1	N 4	O 5	0
22	F	1	Total 41	C 33	Mg 1	N 4	O 3	0

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Mol	Chain	Residues	Atoms					AltConf
22	J	1	Total	C	Mg	N	O	0
			42	34	1	4	3	
22	K	1	Total	C	Mg	N	O	0
			55	45	1	4	5	
22	K	1	Total	C	Mg	N	O	0
			42	34	1	4	3	
22	L	1	Total	C	Mg	N	O	0
			57	47	1	4	5	
22	L	1	Total	C	Mg	N	O	0
			61	51	1	4	5	
22	L	1	Total	C	Mg	N	O	0
			45	35	1	4	5	
22	O	1	Total	C	Mg	N	O	0
			46	36	1	4	5	
22	O	1	Total	C	Mg	N	O	0
			41	33	1	4	3	
22	O	1	Total	C	Mg	N	O	0
			50	40	1	4	5	
22	O	1	Total	C	Mg	N	O	0
			58	48	1	4	5	
22	Z	1	Total	C	Mg	N	O	0
			45	35	1	4	5	
22	Z	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
22	1	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
22	1	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
22	1	1	Total	C	Mg	N	O	0
			45	35	1	4	5	
22	1	1	Total	C	Mg	N	O	0
			45	35	1	4	5	
22	1	1	Total	C	Mg	N	O	0
			45	35	1	4	5	
22	1	1	Total	C	Mg	N	O	0
			55	45	1	4	5	
22	1	1	Total	C	Mg	N	O	0
			42	34	1	4	3	
22	1	1	Total	C	Mg	N	O	0
			45	35	1	4	5	
22	1	1	Total	C	Mg	N	O	0
			65	55	1	4	5	

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Mol	Chain	Residues	Atoms					AltConf
22	2	1	Total	C	Mg	N	O	0
			45	35	1	4	5	
22	2	1	Total	C	Mg	N	O	0
			58	48	1	4	5	
22	2	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
22	2	1	Total	C	Mg	N	O	0
			55	45	1	4	5	
22	2	1	Total	C	Mg	N	O	0
			45	35	1	4	5	
22	2	1	Total	C	Mg	N	O	0
			45	35	1	4	5	
22	2	1	Total	C	Mg	N	O	0
			55	45	1	4	5	
22	2	1	Total	C	Mg	N	O	0
			41	33	1	4	3	
22	2	1	Total	C	Mg	N	O	0
			42	34	1	4	3	
22	2	1	Total	C	Mg	N	O	0
			45	35	1	4	5	
22	3	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
22	3	1	Total	C	Mg	N	O	0
			45	35	1	4	5	
22	3	1	Total	C	Mg	N	O	0
			45	35	1	4	5	
22	3	1	Total	C	Mg	N	O	0
			45	35	1	4	5	
22	3	1	Total	C	Mg	N	O	0
			55	45	1	4	5	
22	4	1	Total	C	Mg	N	O	0
			45	35	1	4	5	
22	4	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
22	4	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
22	4	1	Total	C	Mg	N	O	0
			55	45	1	4	5	
22	4	1	Total	C	Mg	N	O	0
			45	35	1	4	5	
22	4	1	Total	C	Mg	N	O	0
			45	35	1	4	5	

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Mol	Chain	Residues	Atoms					AltConf
22	4	1	Total	C	Mg	N	O	0
			55	45	1	4	5	
22	4	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
22	4	1	Total	C	Mg	N	O	0
			42	34	1	4	3	
22	4	1	Total	C	Mg	N	O	0
			45	35	1	4	5	
22	4	1	Total	C	Mg	N	O	0
			45	35	1	4	5	
22	5	1	Total	C	Mg	N	O	0
			45	35	1	4	5	
22	5	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
22	5	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
22	5	1	Total	C	Mg	N	O	0
			55	45	1	4	5	
22	5	1	Total	C	Mg	N	O	0
			45	35	1	4	5	
22	5	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
22	5	1	Total	C	Mg	N	O	0
			55	45	1	4	5	
22	5	1	Total	C	Mg	N	O	0
			41	33	1	4	3	
22	5	1	Total	C	Mg	N	O	0
			42	34	1	4	3	
22	5	1	Total	C	Mg	N	O	0
			52	42	1	4	5	
22	5	1	Total	C	Mg	N	O	0
			45	35	1	4	5	
22	6	1	Total	C	Mg	N	O	0
			45	35	1	4	5	
22	6	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
22	6	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
22	6	1	Total	C	Mg	N	O	0
			55	45	1	4	5	
22	6	1	Total	C	Mg	N	O	0
			65	55	1	4	5	

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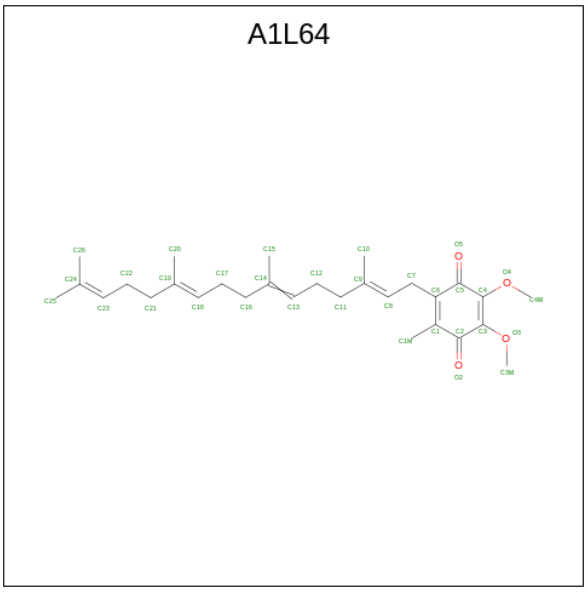
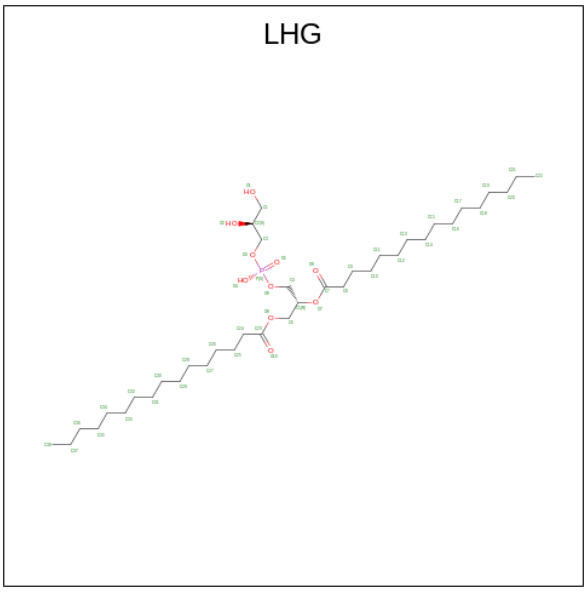
Mol	Chain	Residues	Atoms					AltConf
22	6	1	Total	C	Mg	N	O	0
			45	35	1	4	5	
22	6	1	Total	C	Mg	N	O	0
			45	35	1	4	5	
22	6	1	Total	C	Mg	N	O	0
			55	45	1	4	5	
22	6	1	Total	C	Mg	N	O	0
			41	33	1	4	3	
22	6	1	Total	C	Mg	N	O	0
			42	34	1	4	3	
22	6	1	Total	C	Mg	N	O	0
			45	35	1	4	5	
22	6	1	Total	C	Mg	N	O	0
			42	34	1	4	3	
22	7	1	Total	C	Mg	N	O	0
			45	35	1	4	5	
22	7	1	Total	C	Mg	N	O	0
			55	45	1	4	5	
22	7	1	Total	C	Mg	N	O	0
			45	35	1	4	5	
22	7	1	Total	C	Mg	N	O	0
			55	45	1	4	5	
22	7	1	Total	C	Mg	N	O	0
			45	35	1	4	5	
22	7	1	Total	C	Mg	N	O	0
			45	35	1	4	5	
22	7	1	Total	C	Mg	N	O	0
			55	45	1	4	5	
22	7	1	Total	C	Mg	N	O	0
			41	33	1	4	3	
22	7	1	Total	C	Mg	N	O	0
			41	33	1	4	3	
22	7	1	Total	C	Mg	N	O	0
			45	35	1	4	5	
22	7	1	Total	C	Mg	N	O	0
			45	35	1	4	5	

- Molecule 23 is Coenzyme Q4 (CCD ID: A1L64) (formula: $C_{29}H_{42}O_4$) (labeled as "Ligand of Interest" by depositor).



Mol	Chain	Residues	Atoms	AltConf
23	A	1	Total C O 33 29 4	0
23	B	1	Total C O 33 29 4	0

- Molecule 24 is 1,2-DIPALMITOYL-PHOSPHATIDYL-GLYCEROLE (CCD ID: LHG) (formula: $C_{38}H_{75}O_{10}P$) (labeled as "Ligand of Interest" by depositor).



Mol	Chain	Residues	Atoms	AltConf
24	A	1	Total C O P 49 38 10 1	0

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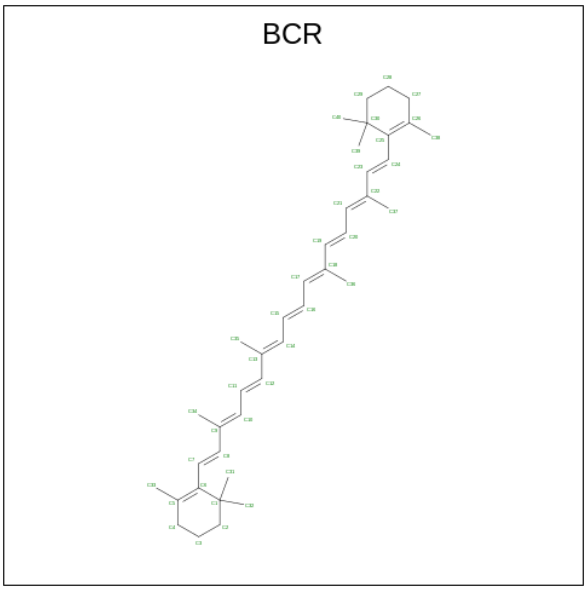
Mol	Chain	Residues	Atoms				AltConf
24	A	1	Total	C	O	P	0
			40	29	10	1	
24	A	1	Total	C	O	P	0
			33	22	10	1	
24	B	1	Total	C	O	P	0
			33	22	10	1	
24	J	1	Total	C	O	P	0
			33	22	10	1	
24	1	1	Total	C	O	P	0
			49	38	10	1	
24	2	1	Total	C	O	P	0
			32	21	10	1	
24	4	1	Total	C	O	P	0
			32	21	10	1	
24	5	1	Total	C	O	P	0
			25	14	10	1	
24	6	1	Total	C	O	P	0
			32	21	10	1	

- Molecule 25 is BETA-CAROTENE (CCD ID: BCR) (formula: $C_{40}H_{56}$) (labeled as "Ligand of Interest" by depositor).



Mol	Chain	Residues	Atoms		AltConf
25	A	1	Total	C	0
			40	40	
25	A	1	Total	C	0
			40	40	

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Mol	Chain	Residues	Atoms	AltConf
25	A	1	Total C 40 40	0
25	A	1	Total C 40 40	0
25	A	1	Total C 40 40	0
25	A	1	Total C 40 40	0
25	B	1	Total C 40 40	0
25	B	1	Total C 40 40	0
25	B	1	Total C 40 40	0
25	B	1	Total C 40 40	0
25	F	1	Total C 40 40	0
25	F	1	Total C 40 40	0
25	I	1	Total C 40 40	0
25	J	1	Total C 40 40	0
25	K	1	Total C 40 40	0
25	L	1	Total C 40 40	0
25	L	1	Total C 40 40	0
25	L	1	Total C 40 40	0
25	Z	1	Total C 40 40	0
25	Z	1	Total C 40 40	0
25	1	1	Total C 40 40	0
25	2	1	Total C 40 40	0
25	4	1	Total C 40 40	0

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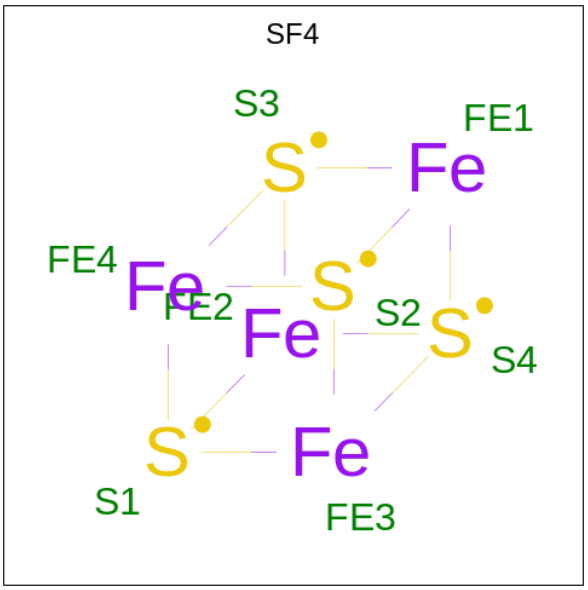
Mol	Chain	Residues	Atoms	AltConf
25	5	1	Total C 40 40	0

- Molecule 26 is IRON/SULFUR CLUSTER (CCD ID: SF4) (formula: Fe_4S_4) (labeled as "Ligand of Interest" by depositor).



Mol	Chain	Residues	Atoms	AltConf
26	A	1	Total Fe S 8 4 4	0
26	C	1	Total Fe S 8 4 4	0
26	C	1	Total Fe S 8 4 4	0

- Molecule 27 is UNKNOWN LIGAND (CCD ID: UNL) (formula:).

Mol	Chain	Residues	Atoms	AltConf
27	A	10	Total C 110 110	0
27	B	2	Total C 18 18	0
27	F	3	Total C 35 35	0
27	I	2	Total C 21 21	0
27	J	2	Total C 22 22	0

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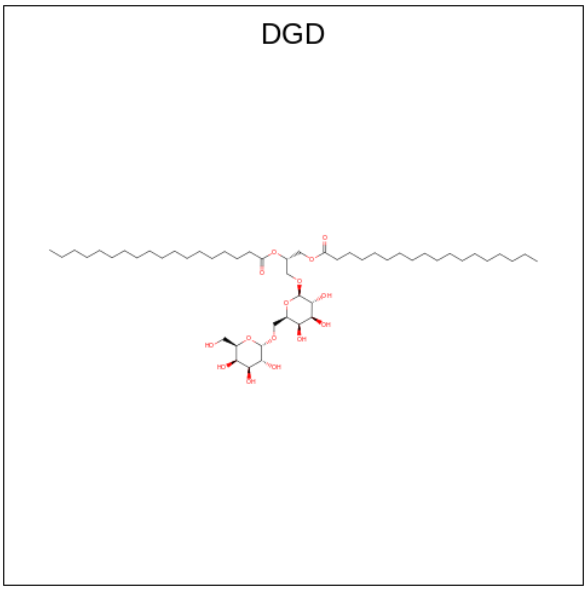
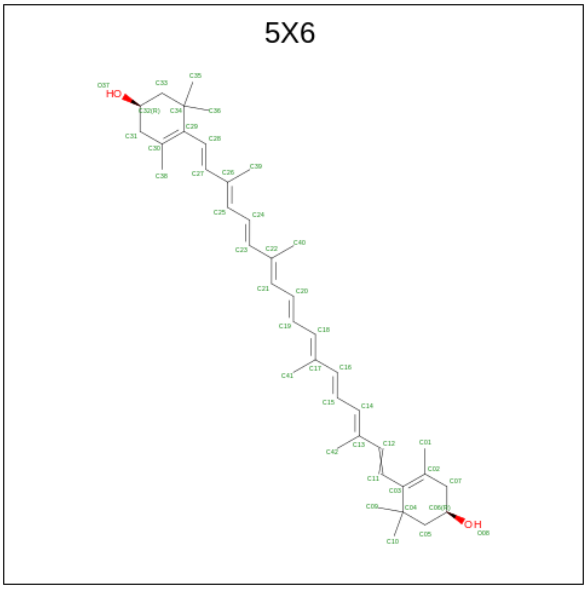
Mol	Chain	Residues	Atoms	AltConf
27	K	1	Total C 11 11	0
27	L	3	Total C 33 33	0
27	M	1	Total C 9 9	0
27	O	3	Total C 24 24	0
27	Z	5	Total C 45 45	0
27	1	3	Total C 33 33	0
27	4	3	Total C 27 27	0
27	5	3	Total C 27 27	0
27	6	7	Total C 73 73	0
27	7	4	Total C 42 42	0

- Molecule 28 is DIGALACTOSYL DIACYL GLYCEROL (DGDG) (CCD ID: DGD) (formula: $C_{51}H_{96}O_{15}$) (labeled as "Ligand of Interest" by depositor).



Mol	Chain	Residues	Atoms	AltConf
28	B	1	Total C O 66 51 15	0

- Molecule 29 is Zeaxanthin (CCD ID: 5X6) (formula: $C_{40}H_{56}O_2$) (labeled as "Ligand of Interest" by depositor).



Mol	Chain	Residues	Atoms	AltConf
29	B	1	Total C O 42 40 2	0
29	J	1	Total C O 42 40 2	0
29	M	1	Total C O 42 40 2	0
29	O	1	Total C O 42 40 2	0
29	O	1	Total C O 42 40 2	0
29	Z	1	Total C O 42 40 2	0
29	1	1	Total C O 42 40 2	0
29	1	1	Total C O 42 40 2	0
29	1	1	Total C O 42 40 2	0
29	1	1	Total C O 42 40 2	0
29	1	1	Total C O 42 40 2	0
29	2	1	Total C O 42 40 2	0

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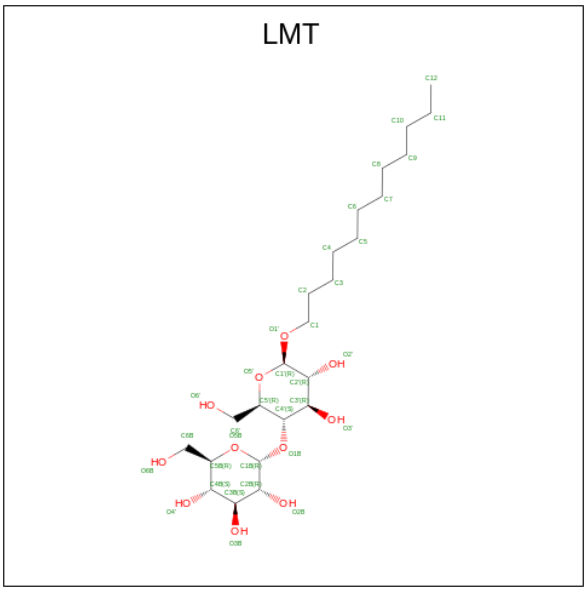
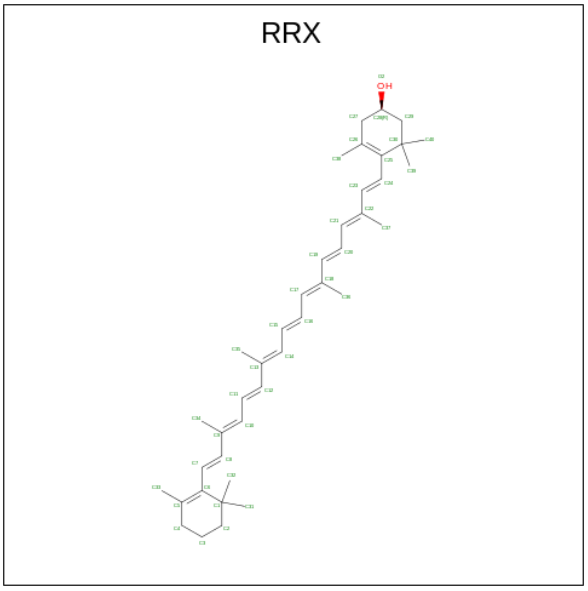
Mol	Chain	Residues	Atoms			AltConf
29	2	1	Total	C	O	0
			42	40	2	
29	2	1	Total	C	O	0
			42	40	2	
29	3	1	Total	C	O	0
			42	40	2	
29	4	1	Total	C	O	0
			42	40	2	
29	4	1	Total	C	O	0
			42	40	2	
29	4	1	Total	C	O	0
			42	40	2	
29	5	1	Total	C	O	0
			42	40	2	
29	5	1	Total	C	O	0
			42	40	2	
29	5	1	Total	C	O	0
			42	40	2	
29	5	1	Total	C	O	0
			42	40	2	
29	6	1	Total	C	O	0
			42	40	2	
29	6	1	Total	C	O	0
			42	40	2	
29	6	1	Total	C	O	0
			42	40	2	
29	7	1	Total	C	O	0
			42	40	2	
29	7	1	Total	C	O	0
			42	40	2	
29	7	1	Total	C	O	0
			42	40	2	
29	7	1	Total	C	O	0
			42	40	2	
29	7	1	Total	C	O	0
			42	40	2	

- Molecule 30 is DODECYL-BETA-D-MALTOSIDE (CCD ID: LMT) (formula: $C_{24}H_{46}O_{11}$).



Mol	Chain	Residues	Atoms			AltConf
30	F	1	Total	C	O	0
			35	24	11	
30	O	1	Total	C	O	0
			35	24	11	
30	4	1	Total	C	O	0
			35	24	11	
30	5	1	Total	C	O	0
			35	24	11	

- Molecule 31 is (3R)-beta,beta-caroten-3-ol (CCD ID: RRX) (formula: $C_{40}H_{56}O$) (labeled as "Ligand of Interest" by depositor).



Mol	Chain	Residues	Atoms	AltConf
31	1	1	Total C O 41 40 1	0
31	4	1	Total C O 41 40 1	0
31	5	1	Total C O 41 40 1	0
31	6	1	Total C O 41 40 1	0

- Molecule 32 is water.

Mol	Chain	Residues	Atoms	AltConf
32	A	189	Total O 189 189	0
32	B	220	Total O 220 220	0
32	C	44	Total O 44 44	0
32	D	29	Total O 29 29	0
32	E	18	Total O 18 18	0
32	F	32	Total O 32 32	0
32	I	3	Total O 3 3	0
32	J	5	Total O 5 5	0
32	K	2	Total O 2 2	0
32	L	15	Total O 15 15	0
32	M	3	Total O 3 3	0
32	O	2	Total O 2 2	0
32	Z	5	Total O 5 5	0
32	1	4	Total O 4 4	0
32	2	6	Total O 6 6	0
32	4	10	Total O 10 10	0

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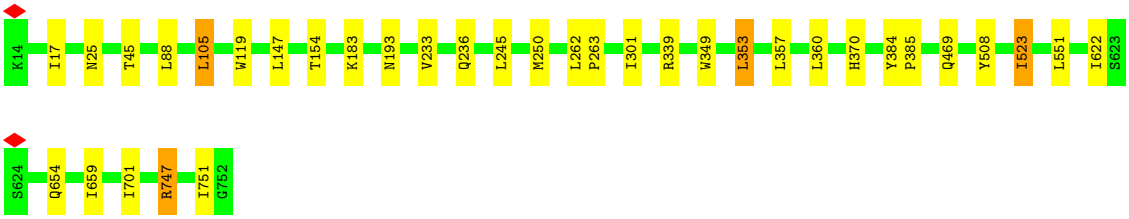
Mol	Chain	Residues	Atoms	AltConf
32	5	11	Total O 11 11	0
32	6	10	Total O 10 10	0

3 Residue-property plots (i)

These plots are drawn for all protein, RNA, DNA and oligosaccharide chains in the entry. The first graphic for a chain summarises the proportions of the various outlier classes displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry and atom inclusion in map density. Residues are color-coded according to the number of geometric quality criteria for which they contain at least one outlier: green = 0, yellow = 1, orange = 2 and red = 3 or more. A red diamond above a residue indicates a poor fit to the EM map for this residue (all-atom inclusion < 40%). Stretches of 2 or more consecutive residues without any outlier are shown as a green connector. Residues present in the sample, but not in the model, are shown in grey.

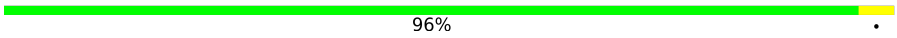
• Molecule 1: Photosystem I P700 chlorophyll a apoprotein A1

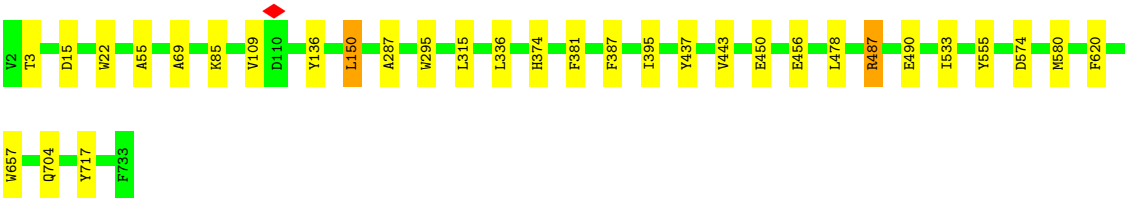
Chain A:



• Molecule 2: Photosystem I P700 chlorophyll a apoprotein A2

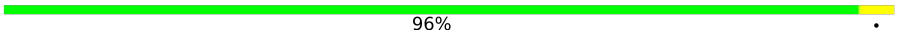
Chain B:

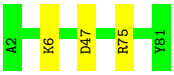




• Molecule 3: Photosystem I iron-sulfur center

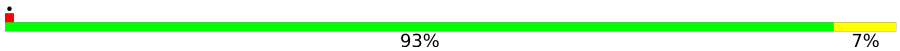
Chain C:

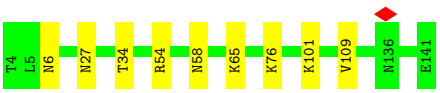




• Molecule 4: Photosystem I reaction center subunit II

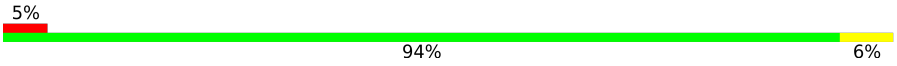
Chain D:





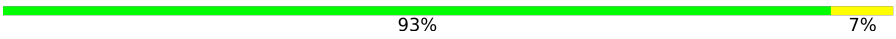
• Molecule 5: Photosystem I subunit IV

Chain E:



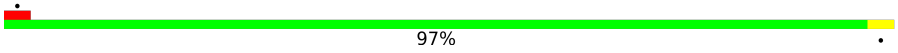
• Molecule 6: Photosystem I reaction center subunit III

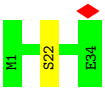
Chain F:



• Molecule 7: Photosystem I reaction center subunit VIII

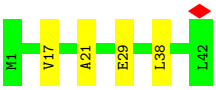
Chain I:





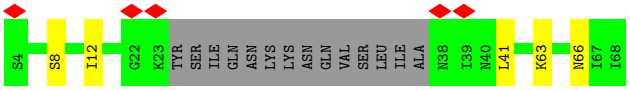
• Molecule 8: Photosystem I reaction center subunit IX

Chain J:



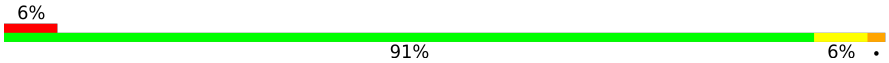
• Molecule 9: PSI-K

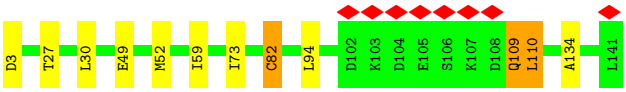
Chain K:



• Molecule 10: Photosystem I reaction center subunit XI

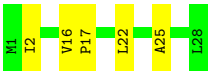
Chain L:





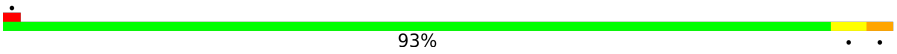
• Molecule 11: Photosystem I reaction center subunit XII

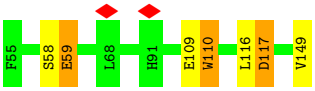
Chain M:



• Molecule 12: Photosystem I subunit O

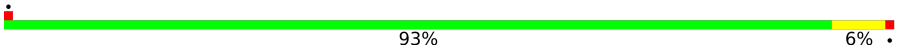
Chain O:

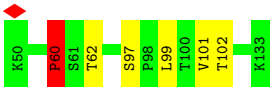




• Molecule 13: Psa28

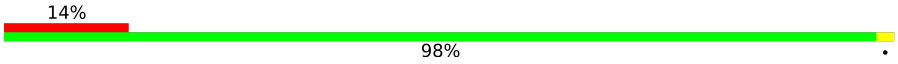
Chain Z:

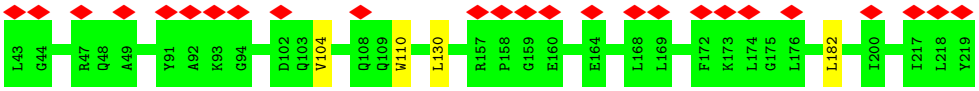




• Molecule 14: RedCAP

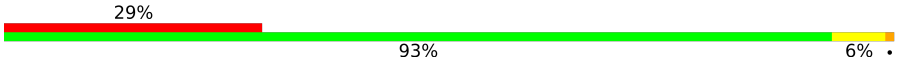
Chain 1:





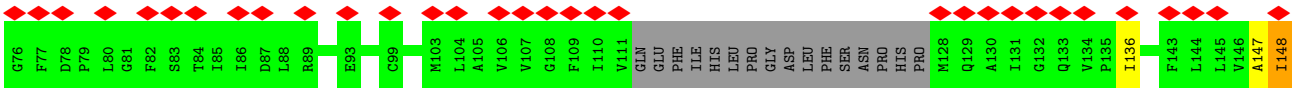
• Molecule 15: Light-harvesting complex protein

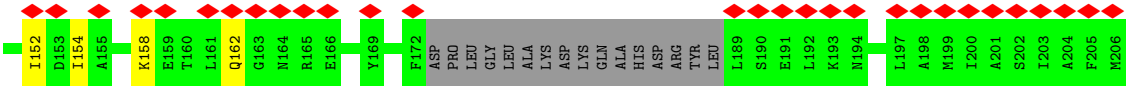
Chain 2:



• Molecule 16: Light-harvesting complex protein

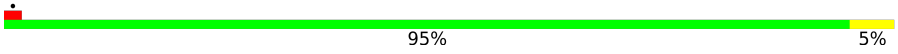
Chain 3:

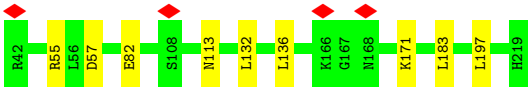




• Molecule 17: Light-harvesting complex protein

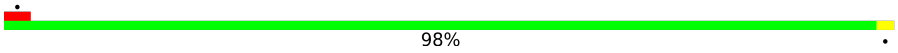
Chain 4:

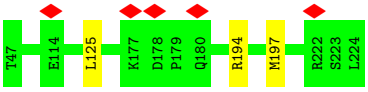




• Molecule 18: Light-harvesting complex protein

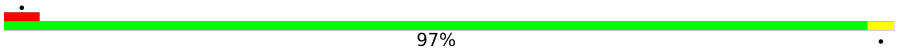
Chain 5:

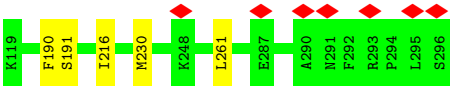




• Molecule 19: Light-harvesting complex protein

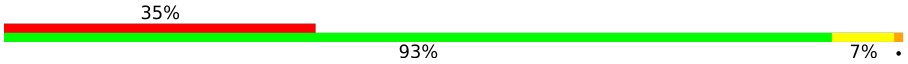
Chain 6:

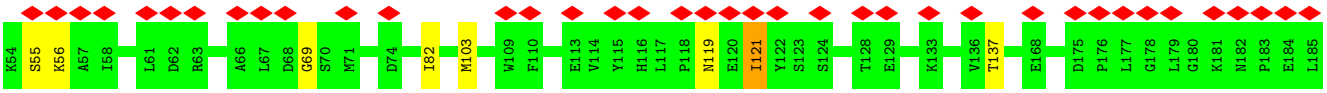


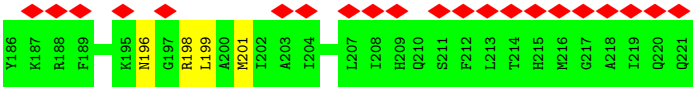


• Molecule 20: Light-harvesting complex protein

Chain 7:







4 Experimental information (i)

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, C1	Depositor
Number of particles used	110313	Depositor
Resolution determination method	FSC 0.143 CUT-OFF	Depositor
CTF correction method	PHASE FLIPPING AND AMPLITUDE CORRECTION	Depositor
Microscope	JEOL CRYO ARM 300	Depositor
Voltage (kV)	300	Depositor
Electron dose ($e^-/Å^2$)	50	Depositor
Minimum defocus (nm)	1200	Depositor
Maximum defocus (nm)	1800	Depositor
Magnification	60000	Depositor
Image detector	GATAN K3 (6k x 4k)	Depositor
Maximum map value	0.167	Depositor
Minimum map value	-0.057	Depositor
Average map value	0.000	Depositor
Map value standard deviation	0.004	Depositor
Recommended contour level	0.011	Depositor
Map size (Å)	240.63998, 240.63998, 240.63998	wwPDB
Map dimensions	320, 320, 320	wwPDB
Map angles (°)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (Å)	0.752, 0.752, 0.752	Depositor

5 Model quality

5.1 Standard geometry

Bond lengths and bond angles in the following residue types are not validated in this section: 5X6, RRX, CLA, CL0, LMT, BCR, LHG, UNL, A1L64, DGD, SF4

The Z score for a bond length (or angle) is the number of standard deviations the observed value is removed from the expected value. A bond length (or angle) with $|Z| > 5$ is considered an outlier worth inspection. RMSZ is the root-mean-square of all Z scores of the bond lengths (or angles).

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#$\|Z\|>5$	RMSZ	#$\|Z\|>5$
1	A	0.50	0/6038	0.84	0/8223
2	B	0.50	0/6072	0.85	1/8286 (0.0%)
3	C	0.52	0/610	0.84	0/826
4	D	0.47	0/1128	0.89	0/1521
5	E	0.46	0/525	0.76	0/708
6	F	0.48	0/1314	0.86	0/1771
7	I	0.51	0/281	0.80	0/383
8	J	0.49	0/346	0.84	0/472
9	K	0.48	0/368	0.95	0/497
10	L	0.46	0/1102	0.96	1/1495 (0.1%)
11	M	0.47	0/215	0.91	0/291
12	O	0.50	0/775	0.93	0/1065
13	Z	0.49	0/655	0.87	0/900
14	1	0.46	0/1400	0.93	0/1898
15	2	0.47	0/1316	0.98	0/1779
16	3	0.46	0/784	0.97	0/1053
17	4	0.48	0/1450	0.89	0/1963
18	5	0.48	0/1438	0.89	0/1943
19	6	0.47	0/1500	0.89	0/2033
20	7	0.48	0/1358	0.96	0/1841
All	All	0.49	0/28675	0.88	2/38948 (0.0%)

There are no bond length outliers.

All (2) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
10	L	82	CYS	CB-CA-C	-5.30	102.56	110.88
2	B	15	ASP	CA-CB-CG	5.06	117.66	112.60

There are no chirality outliers.

There are no planarity outliers.

5.2 Too-close contacts (i)

In the following table, the Non-H and H(model) columns list the number of non-hydrogen atoms and hydrogen atoms in the chain respectively. The H(added) column lists the number of hydrogen atoms added and optimized by MolProbity. The Clashes column lists the number of clashes within the asymmetric unit, whereas Symm-Clashes lists symmetry-related clashes.

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	A	5844	0	5739	14	0
2	B	5859	0	5679	19	0
3	C	600	0	580	1	0
4	D	1103	0	1105	3	0
5	E	516	0	528	0	0
6	F	1285	0	1313	4	0
7	I	273	0	282	1	0
8	J	337	0	358	2	0
9	K	368	0	410	1	0
10	L	1076	0	1087	7	0
11	M	214	0	246	4	0
12	O	748	0	745	4	0
13	Z	637	0	661	2	0
14	1	1370	0	1400	1	0
15	2	1286	0	1298	7	0
16	3	772	0	804	4	0
17	4	1407	0	1414	1	0
18	5	1402	0	1413	1	0
19	6	1450	0	1435	2	0
20	7	1322	0	1328	7	0
21	A	65	0	72	1	0
22	1	472	0	428	7	0
22	2	496	0	417	16	0
22	3	255	0	220	4	0
22	4	572	0	510	11	0
22	5	575	0	516	7	0
22	6	610	0	537	10	0
22	7	517	0	403	15	0
22	A	2546	0	2628	29	0
22	B	2528	0	2657	45	0
22	F	147	0	123	4	0
22	J	42	0	31	1	0
22	K	97	0	80	2	0
22	L	163	0	147	3	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
22	O	195	0	156	3	0
22	Z	110	0	105	5	0
23	A	33	0	0	0	0
23	B	33	0	0	0	0
24	1	49	0	74	0	0
24	2	32	0	34	0	0
24	4	32	0	34	1	0
24	5	25	0	20	0	0
24	6	32	0	34	0	0
24	A	122	0	163	0	0
24	B	33	0	36	0	0
24	J	33	0	36	1	0
25	1	40	0	56	2	0
25	2	40	0	56	0	0
25	4	40	0	56	2	0
25	5	40	0	56	1	0
25	A	240	0	336	11	0
25	B	160	0	224	10	0
25	F	80	0	112	5	0
25	I	40	0	56	1	0
25	J	40	0	56	1	0
25	K	40	0	56	4	0
25	L	120	0	168	3	0
25	Z	80	0	112	4	0
26	A	8	0	0	0	0
26	C	16	0	0	0	0
27	1	33	0	0	0	0
27	4	27	0	0	0	0
27	5	27	0	0	0	0
27	6	73	0	0	0	0
27	7	42	0	0	0	0
27	A	110	0	0	0	0
27	B	18	0	0	0	0
27	F	35	0	0	0	0
27	I	21	0	0	0	0
27	J	22	0	0	0	0
27	K	11	0	0	0	0
27	L	33	0	0	0	0
27	M	9	0	0	0	0
27	O	24	0	0	0	0
27	Z	45	0	0	0	0
28	B	66	0	96	1	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
29	1	210	0	0	0	0
29	2	126	0	0	0	0
29	3	42	0	0	0	0
29	4	126	0	0	0	0
29	5	168	0	0	0	0
29	6	126	0	0	0	0
29	7	210	0	0	0	0
29	B	42	0	0	0	0
29	J	42	0	0	0	0
29	M	42	0	0	0	0
29	O	84	0	0	0	0
29	Z	42	0	0	0	0
30	4	35	0	46	0	0
30	5	35	0	46	0	0
30	F	35	0	46	0	0
30	O	35	0	46	1	0
31	1	41	0	56	3	0
31	4	41	0	56	6	0
31	5	41	0	56	2	0
31	6	41	0	56	3	0
32	1	4	0	0	0	0
32	2	6	0	0	0	0
32	4	10	0	0	0	0
32	5	11	0	0	0	0
32	6	10	0	0	0	0
32	A	189	0	0	0	0
32	B	220	0	0	1	0
32	C	44	0	0	0	0
32	D	29	0	0	0	0
32	E	18	0	0	0	0
32	F	32	0	0	0	0
32	I	3	0	0	0	0
32	J	5	0	0	0	0
32	K	2	0	0	0	0
32	L	15	0	0	0	0
32	M	3	0	0	0	0
32	O	2	0	0	0	0
32	Z	5	0	0	0	0
All	All	41435	0	39134	254	0

The all-atom clashscore is defined as the number of clashes found per 1000 atoms (including hydrogen atoms). The all-atom clashscore for this structure is 3.

The worst 5 of 254 close contacts within the same asymmetric unit are listed below, sorted by their clash magnitude.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:7:56:LYS:CB	22:7:303:CLA:HED1	2.22	0.69
20:7:56:LYS:HB3	22:7:303:CLA:HED1	1.77	0.67
10:L:73:ILE:HD13	14:1:110:TRP:CE3	2.30	0.66
25:B:843:BCR:H311	25:B:843:BCR:HC8	1.79	0.65
22:B:804:CLA:HBD	22:B:804:CLA:HBA1	1.81	0.62

There are no symmetry-related clashes.

5.3 Torsion angles (i)

5.3.1 Protein backbone (i)

In the following table, the Percentiles column shows the percent Ramachandran outliers of the chain as a percentile score with respect to all PDB entries followed by that with respect to all EM entries.

The Analysed column shows the number of residues for which the backbone conformation was analysed, and the total number of residues.

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
1	A	737/739 (100%)	714 (97%)	23 (3%)	0	100 100
2	B	730/732 (100%)	711 (97%)	19 (3%)	0	100 100
3	C	78/80 (98%)	77 (99%)	1 (1%)	0	100 100
4	D	136/138 (99%)	129 (95%)	6 (4%)	1 (1%)	19 19
5	E	62/64 (97%)	58 (94%)	2 (3%)	2 (3%)	3 1
6	F	159/161 (99%)	155 (98%)	4 (2%)	0	100 100
7	I	32/34 (94%)	32 (100%)	0	0	100 100
8	J	40/42 (95%)	39 (98%)	1 (2%)	0	100 100
9	K	47/65 (72%)	45 (96%)	2 (4%)	0	100 100
10	L	137/139 (99%)	132 (96%)	3 (2%)	2 (2%)	8 6
11	M	26/28 (93%)	26 (100%)	0	0	100 100
12	O	93/95 (98%)	87 (94%)	3 (3%)	3 (3%)	3 1
13	Z	82/84 (98%)	79 (96%)	1 (1%)	2 (2%)	5 3
14	1	175/177 (99%)	171 (98%)	4 (2%)	0	100 100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
15	2	160/162 (99%)	156 (98%)	3 (2%)	1 (1%)	22 23
16	3	93/131 (71%)	89 (96%)	3 (3%)	1 (1%)	12 10
17	4	176/178 (99%)	171 (97%)	5 (3%)	0	100 100
18	5	176/178 (99%)	169 (96%)	7 (4%)	0	100 100
19	6	176/178 (99%)	168 (96%)	6 (3%)	2 (1%)	12 10
20	7	166/168 (99%)	156 (94%)	8 (5%)	2 (1%)	11 9
All	All	3481/3573 (97%)	3364 (97%)	101 (3%)	16 (0%)	27 28

5 of 16 Ramachandran outliers are listed below:

Mol	Chain	Res	Type
10	L	110	LEU
15	2	149	GLU
4	D	6	ASN
5	E	29	LYS
12	O	59	GLU

5.3.2 Protein sidechains (i)

In the following table, the Percentiles column shows the percent sidechain outliers of the chain as a percentile score with respect to all PDB entries followed by that with respect to all EM entries.

The Analysed column shows the number of residues for which the sidechain conformation was analysed, and the total number of residues.

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
1	A	610/610 (100%)	591 (97%)	19 (3%)	35 47
2	B	599/599 (100%)	590 (98%)	9 (2%)	60 75
3	C	67/67 (100%)	65 (97%)	2 (3%)	36 48
4	D	120/120 (100%)	116 (97%)	4 (3%)	33 44
5	E	57/57 (100%)	55 (96%)	2 (4%)	31 41
6	F	142/142 (100%)	136 (96%)	6 (4%)	25 33
7	I	31/31 (100%)	31 (100%)	0	100 100
8	J	36/36 (100%)	34 (94%)	2 (6%)	17 21
9	K	44/57 (77%)	41 (93%)	3 (7%)	13 15
10	L	115/115 (100%)	113 (98%)	2 (2%)	56 71

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
11	M	24/24 (100%)	23 (96%)	1 (4%)	25 33
12	O	81/81 (100%)	80 (99%)	1 (1%)	67 80
13	Z	73/73 (100%)	71 (97%)	2 (3%)	40 53
14	1	142/142 (100%)	139 (98%)	3 (2%)	48 63
15	2	136/136 (100%)	132 (97%)	4 (3%)	37 50
16	3	81/109 (74%)	78 (96%)	3 (4%)	29 39
17	4	149/149 (100%)	141 (95%)	8 (5%)	18 23
18	5	151/151 (100%)	150 (99%)	1 (1%)	81 90
19	6	152/152 (100%)	151 (99%)	1 (1%)	81 90
20	7	143/143 (100%)	139 (97%)	4 (3%)	38 51
All	All	2953/2994 (99%)	2876 (97%)	77 (3%)	42 54

5 of 77 residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
15	2	123	GLU
18	5	125	LEU
15	2	193	LEU
17	4	82	GLU
20	7	121	ILE

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. 5 of 41 such sidechains are listed below:

Mol	Chain	Res	Type
17	4	174	GLN
19	6	263	ASN
17	4	219	HIS
19	6	166	HIS
20	7	142	GLN

5.3.3 RNA

There are no RNA molecules in this entry.

5.4 Non-standard residues in protein, DNA, RNA chains (i)

There are no non-standard protein/DNA/RNA residues in this entry.

5.5 Carbohydrates (i)

There are no oligosaccharides in this entry.

5.6 Ligand geometry (i)

Of 298 ligands modelled in this entry, 52 are unknown - leaving 246 for Mogul analysis.

In the following table, the Counts columns list the number of bonds (or angles) for which Mogul statistics could be retrieved, the number of bonds (or angles) that are observed in the model and the number of bonds (or angles) that are defined in the Chemical Component Dictionary. The Link column lists molecule types, if any, to which the group is linked. The Z score for a bond length (or angle) is the number of standard deviations the observed value is removed from the expected value. A bond length (or angle) with $|Z| > 2$ is considered an outlier worth inspection. RMSZ is the root-mean-square of all Z scores of the bond lengths (or angles).

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\#\|Z\| > 2$	Counts	RMSZ	$\#\|Z\| > 2$
22	CLA	A	818	1	65,73,73	1.88	16 (24%)	76,113,113	2.80	28 (36%)
25	BCR	4	316	-	41,41,41	1.67	8 (19%)	56,56,56	1.40	8 (14%)
22	CLA	B	819	32	65,73,73	1.93	16 (24%)	76,113,113	2.59	27 (35%)
22	CLA	4	311	17	45,53,73	2.44	17 (37%)	52,89,113	3.23	24 (46%)
22	CLA	A	811	1	65,73,73	1.84	17 (26%)	76,113,113	2.68	25 (32%)
25	BCR	L	201	-	41,41,41	1.65	8 (19%)	56,56,56	1.40	8 (14%)
22	CLA	2	306	15	45,53,73	2.57	17 (37%)	52,89,113	3.18	26 (50%)
22	CLA	B	810	2	65,73,73	1.81	16 (24%)	76,113,113	2.74	29 (38%)
22	CLA	K	101	32	55,63,73	2.29	16 (29%)	64,101,113	2.88	26 (40%)
22	CLA	O	204	-	41,49,73	2.58	16 (39%)	47,84,113	3.31	25 (53%)
22	CLA	7	312	-	45,53,73	2.52	16 (35%)	52,89,113	3.15	22 (42%)
29	5X6	6	316	-	43,43,43	2.74	18 (41%)	58,60,60	3.97	33 (56%)
22	CLA	B	805	2	65,73,73	1.91	16 (24%)	76,113,113	2.88	32 (42%)
22	CLA	F	206	6	41,49,73	2.35	17 (41%)	47,84,113	3.48	28 (59%)
22	CLA	7	306	20	55,63,73	2.30	17 (30%)	64,101,113	3.06	27 (42%)
31	RRX	1	315	-	42,42,42	1.66	7 (16%)	57,58,58	1.45	8 (14%)
29	5X6	O	208	-	43,43,43	2.77	17 (39%)	58,60,60	4.04	31 (53%)
22	CLA	A	803	1	65,73,73	1.90	16 (24%)	76,113,113	2.79	27 (35%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\#\|Z\|>2$	Counts	RMSZ	$\#\|Z\|>2$
22	CLA	1	305	14	45,53,73	2.47	16 (35%)	52,89,113	3.14	23 (44%)
29	5X6	J	104	-	43,43,43	2.65	18 (41%)	58,60,60	4.23	27 (46%)
22	CLA	A	812	1	65,73,73	1.94	17 (26%)	76,113,113	2.65	23 (30%)
22	CLA	A	828	1	65,73,73	1.80	13 (20%)	76,113,113	2.79	27 (35%)
22	CLA	A	816	1	65,73,73	1.82	17 (26%)	76,113,113	2.59	28 (36%)
22	CLA	7	308	20	45,53,73	2.50	15 (33%)	52,89,113	3.09	25 (48%)
24	LHG	6	319	22	31,31,48	0.34	0	34,37,54	0.48	0
22	CLA	3	303	16	45,53,73	2.55	17 (37%)	52,89,113	3.15	24 (46%)
29	5X6	2	313	-	43,43,43	2.79	17 (39%)	58,60,60	3.92	27 (46%)
22	CLA	B	813	2	65,73,73	1.89	19 (29%)	76,113,113	2.74	25 (32%)
22	CLA	4	310	17	42,50,73	2.41	16 (38%)	48,85,113	3.50	26 (54%)
22	CLA	6	303	19	45,53,73	2.45	17 (37%)	52,89,113	3.11	23 (44%)
22	CLA	A	831	1	65,73,73	1.82	17 (26%)	76,113,113	2.62	24 (31%)
25	BCR	A	845	-	41,41,41	1.64	11 (26%)	56,56,56	1.62	12 (21%)
22	CLA	A	834	1	60,68,73	2.09	18 (30%)	70,107,113	2.86	26 (37%)
24	LHG	A	860	-	32,32,48	0.33	0	35,38,54	0.48	0
24	LHG	B	846	22	32,32,48	0.30	0	35,38,54	0.43	0
22	CLA	A	814	32	45,53,73	2.31	18 (40%)	52,89,113	3.17	24 (46%)
25	BCR	B	844	-	41,41,41	1.65	7 (17%)	56,56,56	1.71	12 (21%)
22	CLA	A	857	32	65,73,73	1.74	16 (24%)	76,113,113	2.83	27 (35%)
22	CLA	2	302	15	45,53,73	2.54	16 (35%)	52,89,113	3.18	24 (46%)
22	CLA	4	308	17	55,63,73	2.22	16 (29%)	64,101,113	2.95	29 (45%)
25	BCR	A	844	-	41,41,41	1.69	9 (21%)	56,56,56	1.62	13 (23%)
26	SF4	C	101	3	0,12,12	-	-	-		
24	LHG	1	317	-	48,48,48	0.26	0	51,54,54	0.30	0
26	SF4	C	102	3	0,12,12	-	-	-		
22	CLA	L	203	10	57,65,73	2.24	17 (29%)	66,103,113	2.88	28 (42%)
22	CLA	7	307	20	45,53,73	2.55	17 (37%)	52,89,113	3.14	26 (50%)
22	CLA	5	307	18	55,63,73	2.22	18 (32%)	64,101,113	2.99	27 (42%)
22	CLA	L	205	32	45,53,73	2.42	17 (37%)	52,89,113	3.06	22 (42%)
25	BCR	A	846	-	41,41,41	1.62	10 (24%)	56,56,56	1.47	9 (16%)
22	CLA	O	205	12	50,58,73	2.36	17 (34%)	58,95,113	3.08	30 (51%)
22	CLA	2	309	24	41,49,73	2.57	15 (36%)	47,84,113	3.28	26 (55%)
24	LHG	A	842	22	39,39,48	0.28	0	42,45,54	0.40	0
29	5X6	7	318	-	43,43,43	2.72	18 (41%)	58,60,60	4.30	31 (53%)
29	5X6	6	317	-	43,43,43	2.61	19 (44%)	58,60,60	4.20	34 (58%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\#\|Z\|>2$	Counts	RMSZ	$\#\|Z\|>2$
22	CLA	B	814	2	57,65,73	2.09	18 (31%)	66,103,113	2.86	26 (39%)
22	CLA	4	309	24	65,73,73	2.03	16 (24%)	76,113,113	2.66	25 (32%)
22	CLA	3	302	16	45,53,73	2.56	16 (35%)	52,89,113	3.21	23 (44%)
30	LMT	O	201	-	36,36,36	0.19	0	47,47,47	0.34	0
29	5X6	1	312	-	43,43,43	2.67	18 (41%)	58,60,60	4.41	31 (53%)
31	RRX	4	317	-	42,42,42	1.66	8 (19%)	57,58,58	1.37	8 (14%)
22	CLA	A	836	1	56,64,73	2.08	19 (33%)	65,102,113	2.98	30 (46%)
22	CLA	A	827	1	65,73,73	1.88	15 (23%)	76,113,113	2.48	24 (31%)
22	CLA	A	858	1	65,73,73	1.87	16 (24%)	76,113,113	2.74	29 (38%)
22	CLA	L	204	10	61,69,73	2.09	18 (29%)	71,108,113	2.78	25 (35%)
30	LMT	F	202	-	36,36,36	0.31	0	47,47,47	0.78	2 (4%)
22	CLA	A	805	1	50,58,73	2.27	17 (34%)	58,95,113	3.08	26 (44%)
25	BCR	B	843	-	41,41,41	1.62	9 (21%)	56,56,56	1.40	9 (16%)
30	LMT	4	319	-	36,36,36	0.20	0	47,47,47	0.40	0
30	LMT	5	320	-	36,36,36	0.18	0	47,47,47	0.43	0
22	CLA	6	313	19	45,53,73	2.53	17 (37%)	52,89,113	3.17	23 (44%)
22	CLA	2	305	15	55,63,73	2.34	17 (30%)	64,101,113	3.02	30 (46%)
22	CLA	A	802	1,22	55,63,73	2.05	18 (32%)	64,101,113	2.91	29 (45%)
22	CLA	5	310	18	52,60,73	2.36	17 (32%)	60,97,113	2.96	24 (40%)
22	CLA	7	310	-	41,49,73	2.59	15 (36%)	47,84,113	3.32	25 (53%)
22	CLA	A	859	1	65,73,73	1.87	18 (27%)	76,113,113	2.94	31 (40%)
29	5X6	5	321	-	43,43,43	2.73	17 (39%)	58,60,60	4.17	33 (56%)
22	CLA	A	839	32	65,73,73	1.90	17 (26%)	76,113,113	2.68	29 (38%)
22	CLA	6	305	19	65,73,73	2.03	17 (26%)	76,113,113	2.71	28 (36%)
22	CLA	B	809	2	65,73,73	1.86	18 (27%)	76,113,113	2.68	25 (32%)
22	CLA	A	808	1	55,63,73	2.08	15 (27%)	64,101,113	2.96	30 (46%)
22	CLA	B	802	32	65,73,73	1.79	17 (26%)	76,113,113	2.78	26 (34%)
22	CLA	A	829	1	50,58,73	2.10	17 (34%)	58,95,113	2.95	28 (48%)
22	CLA	A	824	32	55,63,73	2.03	16 (29%)	64,101,113	2.90	29 (45%)
22	CLA	2	303	15	58,66,73	2.27	16 (27%)	67,104,113	2.86	27 (40%)
25	BCR	1	301	-	41,41,41	1.63	8 (19%)	56,56,56	1.40	9 (16%)
22	CLA	B	817	2	59,67,73	1.96	16 (27%)	68,105,113	2.85	29 (42%)
22	CLA	B	828	2	65,73,73	1.82	15 (23%)	76,113,113	2.81	28 (36%)
22	CLA	B	832	2	65,73,73	1.82	17 (26%)	76,113,113	2.89	27 (35%)
22	CLA	5	306	18	65,73,73	2.02	16 (24%)	76,113,113	2.58	27 (35%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\#\|Z\|>2$	Counts	RMSZ	$\#\|Z\|>2$
22	CLA	B	835	2	65,73,73	1.94	15 (23%)	76,113,113	2.90	31 (40%)
31	RRX	5	322	-	42,42,42	1.63	8 (19%)	57,58,58	1.35	9 (15%)
22	CLA	1	302	32	65,73,73	2.01	17 (26%)	76,113,113	2.73	27 (35%)
22	CLA	B	827	2	65,73,73	1.85	17 (26%)	76,113,113	2.80	29 (38%)
29	5X6	7	317	-	43,43,43	2.65	16 (37%)	58,60,60	4.67	29 (50%)
25	BCR	A	861	-	41,41,41	1.60	8 (19%)	56,56,56	1.39	8 (14%)
22	CLA	A	830	1	56,64,73	2.12	18 (32%)	65,102,113	2.85	26 (40%)
22	CLA	A	815	1	62,70,73	1.92	15 (24%)	72,109,113	2.83	27 (37%)
22	CLA	B	816	2	65,73,73	1.91	16 (24%)	76,113,113	2.98	30 (39%)
22	CLA	1	309	14	45,53,73	2.57	17 (37%)	52,89,113	3.13	23 (44%)
22	CLA	3	304	16	45,53,73	2.55	16 (35%)	52,89,113	3.13	24 (46%)
22	CLA	4	306	17	45,53,73	2.53	16 (35%)	52,89,113	3.14	25 (48%)
25	BCR	K	103	-	41,41,41	1.81	6 (14%)	56,56,56	1.70	9 (16%)
22	CLA	B	806	2	65,73,73	1.92	19 (29%)	76,113,113	2.56	26 (34%)
25	BCR	L	202	-	41,41,41	1.66	7 (17%)	56,56,56	1.51	9 (16%)
29	5X6	7	314	-	43,43,43	2.82	16 (37%)	58,60,60	4.34	32 (55%)
22	CLA	B	838	2	65,73,73	1.76	16 (24%)	76,113,113	2.92	30 (39%)
22	CLA	6	311	24	41,49,73	2.56	16 (39%)	47,84,113	3.35	25 (53%)
24	LHG	A	841	-	48,48,48	0.33	0	51,54,54	0.38	0
22	CLA	J	102	8	42,50,73	2.47	16 (38%)	48,85,113	3.16	27 (56%)
22	CLA	B	807	2	65,73,73	1.91	17 (26%)	76,113,113	2.68	27 (35%)
22	CLA	B	801	-	65,73,73	1.84	15 (23%)	76,113,113	2.55	30 (39%)
23	A1L64	B	840	-	33,33,33	1.04	4 (12%)	40,43,43	1.17	4 (10%)
22	CLA	5	304	18	55,63,73	2.27	16 (29%)	64,101,113	2.98	27 (42%)
22	CLA	7	304	20	55,63,73	2.27	16 (29%)	64,101,113	2.89	24 (37%)
22	CLA	K	102	9	42,50,73	2.36	17 (40%)	48,85,113	3.28	25 (52%)
22	CLA	B	815	2	65,73,73	1.97	14 (21%)	76,113,113	2.73	32 (42%)
28	DGD	B	845	-	67,67,67	0.86	2 (2%)	81,81,81	0.99	5 (6%)
22	CLA	B	849	2	58,66,73	2.00	17 (29%)	67,104,113	2.96	27 (40%)
22	CLA	B	820	2	45,53,73	2.32	15 (33%)	52,89,113	3.14	27 (51%)
22	CLA	A	809	1,22	65,73,73	1.89	16 (24%)	76,113,113	2.86	30 (39%)
29	5X6	7	315	-	43,43,43	2.74	16 (37%)	58,60,60	4.12	33 (56%)
22	CLA	4	304	17	65,73,73	2.00	17 (26%)	76,113,113	2.74	30 (39%)
29	5X6	Z	206	-	43,43,43	2.81	21 (48%)	58,60,60	3.58	27 (46%)
22	CLA	1	308	14	42,50,73	2.52	15 (35%)	48,85,113	3.22	23 (47%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\#\|Z\|>2$	Counts	RMSZ	$\#\|Z\|>2$
22	CLA	1	306	14	45,53,73	2.54	17 (37%)	52,89,113	3.14	27 (51%)
22	CLA	B	811	2	65,73,73	2.03	16 (24%)	76,113,113	2.60	25 (32%)
22	CLA	6	312	19	42,50,73	2.41	17 (40%)	48,85,113	3.27	25 (52%)
22	CLA	A	825	1	65,73,73	1.88	16 (24%)	76,113,113	2.75	26 (34%)
22	CLA	6	308	19	45,53,73	2.38	16 (35%)	52,89,113	3.19	28 (53%)
22	CLA	2	307	15	45,53,73	2.53	17 (37%)	52,89,113	3.16	25 (48%)
22	CLA	2	304	15	65,73,73	2.12	17 (26%)	76,113,113	2.75	30 (39%)
25	BCR	A	862	-	41,41,41	1.62	9 (21%)	56,56,56	1.37	10 (17%)
22	CLA	A	823	32	65,73,73	1.93	19 (29%)	76,113,113	2.67	25 (32%)
22	CLA	5	303	18	65,73,73	2.04	16 (24%)	76,113,113	2.67	29 (38%)
22	CLA	O	206	32	58,66,73	2.23	16 (27%)	67,104,113	2.85	28 (41%)
22	CLA	4	307	17	45,53,73	2.40	17 (37%)	52,89,113	2.91	25 (48%)
22	CLA	B	812	2	55,63,73	2.13	17 (30%)	64,101,113	2.84	27 (42%)
25	BCR	F	207	-	41,41,41	1.74	7 (17%)	56,56,56	1.45	9 (16%)
22	CLA	2	308	15	55,63,73	2.30	17 (30%)	64,101,113	2.97	26 (40%)
22	CLA	A	832	1	65,73,73	1.87	16 (24%)	76,113,113	2.75	26 (34%)
22	CLA	B	823	2	55,63,73	2.10	16 (29%)	64,101,113	2.89	28 (43%)
25	BCR	B	841	-	41,41,41	1.71	8 (19%)	56,56,56	1.49	9 (16%)
22	CLA	1	304	14	45,53,73	2.46	18 (40%)	52,89,113	3.15	26 (50%)
22	CLA	7	313	20	45,53,73	2.55	16 (35%)	52,89,113	3.15	25 (48%)
24	LHG	5	316	22	24,24,48	0.35	0	27,30,54	0.51	0
22	CLA	5	302	18	65,73,73	2.03	17 (26%)	76,113,113	2.79	29 (38%)
25	BCR	Z	202	-	41,41,41	1.68	8 (19%)	56,56,56	1.42	10 (17%)
29	5X6	B	851	-	43,43,43	2.60	17 (39%)	58,60,60	4.07	32 (55%)
29	5X6	O	207	-	43,43,43	2.61	19 (44%)	58,60,60	4.46	31 (53%)
29	5X6	4	314	-	43,43,43	2.77	18 (41%)	58,60,60	3.91	32 (55%)
22	CLA	4	303	17	65,73,73	1.99	16 (24%)	76,113,113	2.78	28 (36%)
22	CLA	7	305	20	45,53,73	2.55	16 (35%)	52,89,113	3.09	24 (46%)
22	CLA	A	826	1	65,73,73	1.85	17 (26%)	76,113,113	2.75	28 (36%)
29	5X6	6	315	-	43,43,43	2.70	18 (41%)	58,60,60	4.09	28 (48%)
22	CLA	B	834	2	51,59,73	2.10	17 (33%)	59,96,113	2.97	26 (44%)
22	CLA	F	205	32	45,53,73	2.23	17 (37%)	52,89,113	3.22	26 (50%)
29	5X6	M	101	-	43,43,43	2.52	16 (37%)	58,60,60	4.79	33 (56%)
22	CLA	A	806	1	65,73,73	1.86	17 (26%)	76,113,113	2.68	27 (35%)
22	CLA	B	822	2	65,73,73	1.88	18 (27%)	76,113,113	2.74	24 (31%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\#\|Z\|>2$	Counts	RMSZ	$\#\|Z\|>2$
22	CLA	7	311	-	41,49,73	2.61	15 (36%)	47,84,113	3.32	24 (51%)
22	CLA	B	839	24	65,73,73	1.91	16 (24%)	76,113,113	2.72	27 (35%)
22	CLA	B	824	32	65,73,73	1.88	17 (26%)	76,113,113	2.68	25 (32%)
22	CLA	A	817	1	65,73,73	1.90	17 (26%)	76,113,113	2.71	28 (36%)
25	BCR	A	843	-	41,41,41	1.70	8 (19%)	56,56,56	1.53	8 (14%)
22	CLA	5	309	18	42,50,73	2.35	15 (35%)	48,85,113	3.27	23 (47%)
22	CLA	4	302	17	45,53,73	2.54	16 (35%)	52,89,113	3.09	24 (46%)
22	CLA	B	829	2	65,73,73	1.84	16 (24%)	76,113,113	3.01	29 (38%)
29	5X6	5	314	-	43,43,43	2.68	18 (41%)	58,60,60	4.46	28 (48%)
29	5X6	5	312	-	43,43,43	2.67	17 (39%)	58,60,60	4.12	30 (51%)
22	CLA	B	825	32	65,73,73	1.85	17 (26%)	76,113,113	2.79	28 (36%)
22	CLA	A	813	1	42,50,73	2.38	18 (42%)	48,85,113	3.44	28 (58%)
29	5X6	1	311	-	43,43,43	2.64	17 (39%)	58,60,60	4.51	32 (55%)
22	CLA	5	311	18	45,53,73	2.50	18 (40%)	52,89,113	3.19	26 (50%)
25	BCR	5	315	-	41,41,41	1.73	8 (19%)	56,56,56	1.42	10 (17%)
29	5X6	7	316	-	43,43,43	2.72	18 (41%)	58,60,60	4.31	29 (50%)
22	CLA	5	305	18	45,53,73	2.53	16 (35%)	52,89,113	3.15	24 (46%)
22	CLA	6	306	19	55,63,73	2.24	15 (27%)	64,101,113	3.08	29 (45%)
22	CLA	4	312	17	45,53,73	2.46	16 (35%)	52,89,113	3.23	30 (57%)
22	CLA	Z	204	13	65,73,73	1.93	18 (27%)	76,113,113	2.78	32 (42%)
25	BCR	F	201	-	41,41,41	1.69	10 (24%)	56,56,56	1.43	8 (14%)
22	CLA	7	303	20	45,53,73	2.55	17 (37%)	52,89,113	3.20	25 (48%)
22	CLA	F	204	32	61,69,73	1.88	17 (27%)	71,108,113	2.77	25 (35%)
29	5X6	4	313	-	43,43,43	2.74	18 (41%)	58,60,60	3.98	27 (46%)
22	CLA	O	203	24	46,54,73	2.33	16 (34%)	53,90,113	3.22	27 (50%)
22	CLA	5	301	18	45,53,73	2.39	18 (40%)	52,89,113	3.05	24 (46%)
25	BCR	J	103	-	41,41,41	1.78	8 (19%)	56,56,56	1.66	12 (21%)
22	CLA	6	314	19	42,50,73	2.43	17 (40%)	48,85,113	3.25	23 (47%)
22	CLA	A	807	1	65,73,73	1.86	19 (29%)	76,113,113	2.75	29 (38%)
22	CLA	A	848	-	65,73,73	1.79	18 (27%)	76,113,113	2.51	28 (36%)
22	CLA	A	835	1	51,59,73	2.11	17 (33%)	59,96,113	3.12	27 (45%)
23	A1L64	A	840	-	33,33,33	0.92	2 (6%)	40,43,43	0.99	4 (10%)
29	5X6	1	313	-	43,43,43	2.64	19 (44%)	58,60,60	4.23	29 (50%)
25	BCR	B	842	-	41,41,41	1.64	8 (19%)	56,56,56	1.39	8 (14%)
22	CLA	B	831	2	65,73,73	1.93	17 (26%)	76,113,113	2.71	25 (32%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\#\|Z\|>2$	Counts	RMSZ	$\#\|Z\|>2$
22	CLA	6	304	19	65,73,73	2.01	16 (24%)	76,113,113	2.72	25 (32%)
29	5X6	3	306	-	43,43,43	2.74	17 (39%)	58,60,60	4.32	31 (53%)
22	CLA	A	837	1	65,73,73	1.84	16 (24%)	76,113,113	2.84	27 (35%)
22	CLA	A	820	1	65,73,73	1.97	18 (27%)	76,113,113	2.92	30 (39%)
22	CLA	B	821	2	46,54,73	2.31	16 (34%)	53,90,113	3.15	23 (43%)
22	CLA	A	838	1	65,73,73	1.84	18 (27%)	76,113,113	2.90	31 (40%)
22	CLA	B	830	2	65,73,73	1.91	17 (26%)	76,113,113	2.67	28 (36%)
22	CLA	A	804	1	65,73,73	1.95	19 (29%)	76,113,113	2.63	26 (34%)
29	5X6	1	316	-	43,43,43	2.79	18 (41%)	58,60,60	4.35	32 (55%)
24	LHG	J	106	-	32,32,48	0.32	0	35,38,54	0.50	0
22	CLA	B	803	2	65,73,73	1.78	15 (23%)	76,113,113	2.78	34 (44%)
22	CLA	2	310	15	42,50,73	2.55	16 (38%)	48,85,113	3.26	23 (47%)
29	5X6	4	315	-	43,43,43	2.73	18 (41%)	58,60,60	4.23	30 (51%)
22	CLA	B	837	32	65,73,73	1.85	16 (24%)	76,113,113	2.65	23 (30%)
25	BCR	I	102	-	41,41,41	1.65	9 (21%)	56,56,56	1.36	8 (14%)
22	CLA	6	310	19	55,63,73	2.24	17 (30%)	64,101,113	2.92	28 (43%)
22	CLA	6	309	19	45,53,73	2.39	17 (37%)	52,89,113	3.01	26 (50%)
25	BCR	Z	205	-	41,41,41	1.73	7 (17%)	56,56,56	1.59	10 (17%)
22	CLA	5	308	24	41,49,73	2.44	18 (43%)	47,84,113	3.30	25 (53%)
22	CLA	B	808	2	65,73,73	1.85	18 (27%)	76,113,113	2.93	32 (42%)
22	CLA	A	821	1	45,53,73	2.24	15 (33%)	52,89,113	3.30	24 (46%)
22	CLA	1	303	14	65,73,73	2.04	16 (24%)	76,113,113	2.67	32 (42%)
22	CLA	7	309	20	55,63,73	2.30	16 (29%)	64,101,113	2.96	29 (45%)
22	CLA	A	833	1	65,73,73	1.96	18 (27%)	76,113,113	2.66	27 (35%)
22	CLA	1	307	14	55,63,73	2.32	16 (29%)	64,101,113	3.08	30 (46%)
24	LHG	2	315	22	31,31,48	0.35	0	34,37,54	0.62	0
29	5X6	1	314	-	43,43,43	2.72	17 (39%)	58,60,60	4.33	30 (51%)
22	CLA	6	307	19	65,73,73	2.07	18 (27%)	76,113,113	2.68	27 (35%)
29	5X6	5	313	-	43,43,43	2.73	19 (44%)	58,60,60	3.81	29 (50%)
22	CLA	4	305	32	55,63,73	2.20	18 (32%)	64,101,113	2.97	27 (42%)
22	CLA	B	826	2	65,73,73	1.88	17 (26%)	76,113,113	2.73	29 (38%)
26	SF4	A	847	1,2	0,12,12	-	-	-		
22	CLA	B	818	2	60,68,73	1.95	16 (26%)	70,107,113	2.83	27 (38%)
22	CLA	A	810	1	54,62,73	2.14	17 (31%)	62,99,113	2.94	28 (45%)
22	CLA	B	804	2	65,73,73	1.90	16 (24%)	76,113,113	2.91	29 (38%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\#\|Z\|>2$	Counts	RMSZ	$\#\|Z\|>2$
22	CLA	B	850	-	45,53,73	2.50	16 (35%)	52,89,113	3.18	25 (48%)
25	BCR	2	301	-	41,41,41	1.62	7 (17%)	56,56,56	1.41	7 (12%)
22	CLA	Z	201	32	45,53,73	2.28	15 (33%)	52,89,113	3.14	24 (46%)
22	CLA	A	819	32	65,73,73	1.95	19 (29%)	76,113,113	2.61	25 (32%)
25	BCR	L	206	-	41,41,41	1.76	7 (17%)	56,56,56	1.64	12 (21%)
22	CLA	B	833	32	65,73,73	1.89	17 (26%)	76,113,113	2.58	26 (34%)
31	RRX	6	318	-	42,42,42	1.70	8 (19%)	57,58,58	1.41	12 (21%)
22	CLA	A	822	1	55,63,73	2.06	17 (30%)	64,101,113	2.86	27 (42%)
22	CLA	B	836	2	47,55,73	2.15	17 (36%)	54,91,113	3.33	26 (48%)
29	5X6	2	314	-	43,43,43	2.72	18 (41%)	58,60,60	4.34	30 (51%)
21	CL0	A	801	1	65,73,73	1.73	14 (21%)	76,113,113	2.68	32 (42%)
29	5X6	2	312	-	43,43,43	2.80	18 (41%)	58,60,60	4.30	30 (51%)
22	CLA	3	305	16	55,63,73	2.31	16 (29%)	64,101,113	2.93	27 (42%)
24	LHG	4	318	22	31,31,48	0.32	0	34,37,54	0.58	0
22	CLA	1	310	32	65,73,73	2.09	17 (26%)	76,113,113	2.85	31 (40%)
22	CLA	3	301	16	65,73,73	2.13	17 (26%)	76,113,113	2.74	26 (34%)
22	CLA	2	311	15	45,53,73	2.52	16 (35%)	52,89,113	3.15	24 (46%)

In the following table, the Chirals column lists the number of chiral outliers, the number of chiral centers analysed, the number of these observed in the model and the number defined in the Chemical Component Dictionary. Similar counts are reported in the Torsion and Rings columns. '-' means no outliers of that kind were identified.

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
22	CLA	A	818	1	1/1/15/20	12/37/115/115	-
25	BCR	4	316	-	-	2/29/63/63	0/2/2/2
22	CLA	B	819	32	1/1/15/20	6/37/115/115	-
22	CLA	4	311	17	1/1/11/20	0/13/91/115	-
22	CLA	A	811	1	1/1/15/20	5/37/115/115	-
25	BCR	L	201	-	-	0/29/63/63	0/2/2/2
22	CLA	2	306	15	1/1/11/20	7/13/91/115	-
22	CLA	B	810	2	1/1/15/20	5/37/115/115	-
22	CLA	K	101	32	1/1/13/20	9/25/103/115	-
22	CLA	O	204	-	1/1/10/20	5/8/86/115	-
22	CLA	7	312	-	1/1/11/20	5/13/91/115	-
29	5X6	6	316	-	-	13/29/67/67	0/2/2/2

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
22	CLA	B	805	2	1/1/15/20	11/37/115/115	-
22	CLA	F	206	6	1/1/10/20	4/8/86/115	-
22	CLA	7	306	20	-	12/25/103/115	-
31	RRX	1	315	-	-	3/29/65/65	0/2/2/2
29	5X6	O	208	-	-	18/29/67/67	0/2/2/2
22	CLA	A	803	1	1/1/15/20	7/37/115/115	-
22	CLA	1	305	14	1/1/11/20	5/13/91/115	-
29	5X6	J	104	-	-	16/29/67/67	0/2/2/2
22	CLA	A	812	1	1/1/15/20	12/37/115/115	-
22	CLA	A	828	1	1/1/15/20	12/37/115/115	-
22	CLA	A	816	1	1/1/15/20	8/37/115/115	-
22	CLA	7	308	20	1/1/11/20	0/13/91/115	-
24	LHG	6	319	22	-	15/36/36/53	-
22	CLA	3	303	16	1/1/11/20	6/13/91/115	-
29	5X6	2	313	-	-	15/29/67/67	0/2/2/2
22	CLA	B	813	2	1/1/15/20	11/37/115/115	-
22	CLA	4	310	17	1/1/10/20	4/10/88/115	-
22	CLA	6	303	19	1/1/11/20	6/13/91/115	-
22	CLA	A	831	1	1/1/15/20	9/37/115/115	-
25	BCR	A	845	-	-	2/29/63/63	0/2/2/2
22	CLA	A	834	1	-	12/31/109/115	-
24	LHG	A	860	-	-	13/37/37/53	-
24	LHG	B	846	22	-	6/37/37/53	-
22	CLA	A	814	32	-	3/13/91/115	-
25	BCR	B	844	-	-	3/29/63/63	0/2/2/2
22	CLA	A	857	32	1/1/15/20	2/37/115/115	-
22	CLA	2	302	15	1/1/11/20	4/13/91/115	-
22	CLA	4	308	17	1/1/13/20	8/25/103/115	-
25	BCR	A	844	-	-	2/29/63/63	0/2/2/2
26	SF4	C	101	3	-	-	0/6/5/5
24	LHG	1	317	-	-	16/53/53/53	-
26	SF4	C	102	3	-	-	0/6/5/5
22	CLA	L	203	10	1/1/13/20	12/28/106/115	-
22	CLA	7	307	20	1/1/11/20	4/13/91/115	-
22	CLA	5	307	18	1/1/13/20	2/25/103/115	-

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
22	CLA	L	205	32	1/1/11/20	6/13/91/115	-
25	BCR	A	846	-	-	5/29/63/63	0/2/2/2
22	CLA	O	205	12	1/1/12/20	4/19/97/115	-
22	CLA	2	309	24	1/1/10/20	2/8/86/115	-
24	LHG	A	842	22	-	12/44/44/53	-
29	5X6	7	318	-	-	19/29/67/67	0/2/2/2
29	5X6	6	317	-	-	15/29/67/67	0/2/2/2
22	CLA	B	814	2	1/1/13/20	9/28/106/115	-
22	CLA	4	309	24	1/1/15/20	11/37/115/115	-
22	CLA	3	302	16	1/1/11/20	4/13/91/115	-
30	LMT	O	201	-	-	5/21/61/61	0/2/2/2
29	5X6	1	312	-	-	15/29/67/67	0/2/2/2
31	RRX	4	317	-	-	0/29/65/65	0/2/2/2
22	CLA	A	836	1	1/1/13/20	4/27/105/115	-
22	CLA	A	827	1	1/1/15/20	6/37/115/115	-
22	CLA	A	858	1	1/1/15/20	9/37/115/115	-
22	CLA	L	204	10	1/1/14/20	10/33/111/115	-
30	LMT	F	202	-	-	7/21/61/61	0/2/2/2
22	CLA	A	805	1	1/1/12/20	4/19/97/115	-
25	BCR	B	843	-	-	4/29/63/63	0/2/2/2
30	LMT	4	319	-	-	5/21/61/61	0/2/2/2
30	LMT	5	320	-	-	5/21/61/61	0/2/2/2
22	CLA	6	313	19	1/1/11/20	7/13/91/115	-
22	CLA	2	305	15	-	11/25/103/115	-
22	CLA	A	802	1,22	1/1/13/20	7/25/103/115	-
22	CLA	5	310	18	1/1/12/20	8/22/100/115	-
22	CLA	7	310	-	1/1/10/20	6/8/86/115	-
22	CLA	A	859	1	1/1/15/20	20/37/115/115	-
29	5X6	5	321	-	-	14/29/67/67	0/2/2/2
22	CLA	A	839	32	1/1/15/20	12/37/115/115	-
22	CLA	6	305	19	1/1/15/20	11/37/115/115	-
22	CLA	B	809	2	1/1/15/20	11/37/115/115	-
22	CLA	A	808	1	1/1/13/20	11/25/103/115	-
22	CLA	B	802	32	1/1/15/20	8/37/115/115	-

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
22	CLA	A	829	1	1/1/12/20	4/19/97/115	-
22	CLA	A	824	32	1/1/13/20	5/25/103/115	-
22	CLA	2	303	15	1/1/13/20	8/29/107/115	-
25	BCR	1	301	-	-	4/29/63/63	0/2/2/2
22	CLA	B	817	2	1/1/13/20	10/30/108/115	-
22	CLA	B	828	2	1/1/15/20	2/37/115/115	-
22	CLA	B	832	2	1/1/15/20	7/37/115/115	-
22	CLA	5	306	18	1/1/15/20	7/37/115/115	-
22	CLA	B	835	2	1/1/15/20	6/37/115/115	-
31	RRX	5	322	-	-	2/29/65/65	0/2/2/2
22	CLA	1	302	32	1/1/15/20	12/37/115/115	-
22	CLA	B	827	2	1/1/15/20	5/37/115/115	-
29	5X6	7	317	-	-	22/29/67/67	0/2/2/2
25	BCR	A	861	-	-	0/29/63/63	0/2/2/2
22	CLA	A	830	1	1/1/13/20	4/27/105/115	-
22	CLA	A	815	1	1/1/14/20	10/34/112/115	-
22	CLA	B	816	2	1/1/15/20	8/37/115/115	-
22	CLA	1	309	14	1/1/11/20	6/13/91/115	-
22	CLA	3	304	16	1/1/11/20	2/13/91/115	-
22	CLA	4	306	17	1/1/11/20	6/13/91/115	-
25	BCR	K	103	-	-	2/29/63/63	0/2/2/2
22	CLA	B	806	2	1/1/15/20	13/37/115/115	-
25	BCR	L	202	-	-	4/29/63/63	0/2/2/2
29	5X6	7	314	-	-	19/29/67/67	0/2/2/2
22	CLA	B	838	2	-	12/37/115/115	-
22	CLA	6	311	24	1/1/10/20	6/8/86/115	-
24	LHG	A	841	-	-	18/53/53/53	-
22	CLA	J	102	8	1/1/10/20	1/10/88/115	-
22	CLA	B	807	2	1/1/15/20	7/37/115/115	-
22	CLA	B	801	-	1/1/15/20	2/37/115/115	-
23	A1L64	B	840	-	-	6/27/51/51	0/1/1/1
22	CLA	5	304	18	1/1/13/20	6/25/103/115	-
22	CLA	7	304	20	1/1/13/20	6/25/103/115	-
22	CLA	K	102	9	1/1/10/20	3/10/88/115	-

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
22	CLA	B	815	2	1/1/15/20	13/37/115/115	-
28	DGD	B	845	-	-	22/55/95/95	0/2/2/2
22	CLA	B	849	2	-	6/29/107/115	-
22	CLA	B	820	2	1/1/11/20	2/13/91/115	-
22	CLA	A	809	1,22	1/1/15/20	7/37/115/115	-
29	5X6	7	315	-	-	21/29/67/67	0/2/2/2
22	CLA	4	304	17	1/1/15/20	15/37/115/115	-
29	5X6	Z	206	-	-	12/29/67/67	0/2/2/2
22	CLA	1	308	14	1/1/10/20	4/10/88/115	-
22	CLA	1	306	14	1/1/11/20	6/13/91/115	-
22	CLA	B	811	2	1/1/15/20	15/37/115/115	-
22	CLA	6	312	19	1/1/10/20	5/10/88/115	-
22	CLA	A	825	1	1/1/15/20	7/37/115/115	-
22	CLA	6	308	19	1/1/11/20	3/13/91/115	-
22	CLA	2	307	15	1/1/11/20	1/13/91/115	-
22	CLA	2	304	15	1/1/15/20	13/37/115/115	-
25	BCR	A	862	-	-	2/29/63/63	0/2/2/2
22	CLA	A	823	32	1/1/15/20	9/37/115/115	-
22	CLA	5	303	18	1/1/15/20	15/37/115/115	-
22	CLA	O	206	32	1/1/13/20	14/29/107/115	-
22	CLA	4	307	17	1/1/11/20	0/13/91/115	-
22	CLA	B	812	2	-	9/25/103/115	-
25	BCR	F	207	-	-	2/29/63/63	0/2/2/2
22	CLA	2	308	15	1/1/13/20	7/25/103/115	-
22	CLA	A	832	1	1/1/15/20	10/37/115/115	-
22	CLA	B	823	2	1/1/13/20	9/25/103/115	-
25	BCR	B	841	-	-	0/29/63/63	0/2/2/2
22	CLA	1	304	14	1/1/11/20	4/13/91/115	-
22	CLA	7	313	20	1/1/11/20	5/13/91/115	-
24	LHG	5	316	22	-	3/29/29/53	-
22	CLA	5	302	18	1/1/15/20	10/37/115/115	-
25	BCR	Z	202	-	-	2/29/63/63	0/2/2/2
29	5X6	B	851	-	-	11/29/67/67	0/2/2/2
29	5X6	O	207	-	-	15/29/67/67	0/2/2/2
29	5X6	4	314	-	-	14/29/67/67	0/2/2/2

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
22	CLA	4	303	17	1/1/15/20	12/37/115/115	-
22	CLA	7	305	20	1/1/11/20	4/13/91/115	-
22	CLA	A	826	1	1/1/15/20	8/37/115/115	-
29	5X6	6	315	-	-	15/29/67/67	0/2/2/2
22	CLA	B	834	2	1/1/12/20	5/21/99/115	-
22	CLA	F	205	32	1/1/11/20	3/13/91/115	-
29	5X6	M	101	-	-	22/29/67/67	0/2/2/2
22	CLA	A	806	1	1/1/15/20	10/37/115/115	-
22	CLA	B	822	2	1/1/15/20	12/37/115/115	-
22	CLA	7	311	-	1/1/10/20	2/8/86/115	-
22	CLA	B	839	24	1/1/15/20	4/37/115/115	-
22	CLA	B	824	32	1/1/15/20	6/37/115/115	-
22	CLA	A	817	1	1/1/15/20	7/37/115/115	-
25	BCR	A	843	-	-	3/29/63/63	0/2/2/2
22	CLA	5	309	18	1/1/10/20	2/10/88/115	-
22	CLA	4	302	17	1/1/11/20	2/13/91/115	-
22	CLA	B	829	2	1/1/15/20	12/37/115/115	-
29	5X6	5	314	-	-	18/29/67/67	0/2/2/2
29	5X6	5	312	-	-	12/29/67/67	0/2/2/2
22	CLA	B	825	32	1/1/15/20	11/37/115/115	-
22	CLA	A	813	1	1/1/10/20	4/10/88/115	-
29	5X6	1	311	-	-	21/29/67/67	0/2/2/2
22	CLA	5	311	18	1/1/11/20	5/13/91/115	-
25	BCR	5	315	-	-	0/29/63/63	0/2/2/2
29	5X6	7	316	-	-	17/29/67/67	0/2/2/2
22	CLA	5	305	18	1/1/11/20	7/13/91/115	-
22	CLA	6	306	19	1/1/13/20	9/25/103/115	-
22	CLA	4	312	17	1/1/11/20	4/13/91/115	-
22	CLA	Z	204	13	1/1/15/20	15/37/115/115	-
25	BCR	F	201	-	-	0/29/63/63	0/2/2/2
22	CLA	7	303	20	1/1/11/20	7/13/91/115	-
22	CLA	F	204	32	1/1/14/20	6/33/111/115	-
29	5X6	4	313	-	-	13/29/67/67	0/2/2/2
22	CLA	O	203	24	1/1/11/20	5/15/93/115	-

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
22	CLA	5	301	18	1/1/11/20	4/13/91/115	-
25	BCR	J	103	-	-	2/29/63/63	0/2/2/2
22	CLA	6	314	19	1/1/10/20	4/10/88/115	-
22	CLA	A	807	1	-	10/37/115/115	-
22	CLA	A	848	-	1/1/15/20	7/37/115/115	-
22	CLA	A	835	1	1/1/12/20	5/21/99/115	-
23	A1L64	A	840	-	-	9/27/51/51	0/1/1/1
29	5X6	1	313	-	-	18/29/67/67	0/2/2/2
25	BCR	B	842	-	-	3/29/63/63	0/2/2/2
22	CLA	B	831	2	1/1/15/20	11/37/115/115	-
22	CLA	6	304	19	1/1/15/20	10/37/115/115	-
29	5X6	3	306	-	-	17/29/67/67	0/2/2/2
22	CLA	A	837	1	1/1/15/20	6/37/115/115	-
22	CLA	A	820	1	-	20/37/115/115	-
22	CLA	B	821	2	-	3/15/93/115	-
22	CLA	A	838	1	1/1/15/20	7/37/115/115	-
22	CLA	B	830	2	-	12/37/115/115	-
22	CLA	A	804	1	1/1/15/20	11/37/115/115	-
29	5X6	1	316	-	-	20/29/67/67	0/2/2/2
24	LHG	J	106	-	-	4/37/37/53	-
22	CLA	B	803	2	1/1/15/20	5/37/115/115	-
22	CLA	2	310	15	1/1/10/20	3/10/88/115	-
29	5X6	4	315	-	-	18/29/67/67	0/2/2/2
22	CLA	B	837	32	1/1/15/20	10/37/115/115	-
25	BCR	I	102	-	-	0/29/63/63	0/2/2/2
22	CLA	6	310	19	1/1/13/20	8/25/103/115	-
22	CLA	6	309	19	1/1/11/20	0/13/91/115	-
25	BCR	Z	205	-	-	2/29/63/63	0/2/2/2
22	CLA	5	308	24	1/1/10/20	0/8/86/115	-
22	CLA	B	808	2	1/1/15/20	10/37/115/115	-
22	CLA	A	821	1	1/1/11/20	3/13/91/115	-
22	CLA	1	303	14	1/1/15/20	13/37/115/115	-
22	CLA	7	309	20	1/1/13/20	7/25/103/115	-
22	CLA	A	833	1	1/1/15/20	10/37/115/115	-
22	CLA	1	307	14	-	10/25/103/115	-

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
24	LHG	2	315	22	-	17/36/36/53	-
29	5X6	1	314	-	-	18/29/67/67	0/2/2/2
22	CLA	6	307	19	1/1/15/20	9/37/115/115	-
29	5X6	5	313	-	-	14/29/67/67	0/2/2/2
22	CLA	4	305	32	1/1/13/20	8/25/103/115	-
22	CLA	B	826	2	1/1/15/20	2/37/115/115	-
26	SF4	A	847	1,2	-	-	0/6/5/5
22	CLA	B	818	2	1/1/14/20	4/31/109/115	-
22	CLA	A	810	1	1/1/12/20	7/24/102/115	-
22	CLA	B	804	2	1/1/15/20	15/37/115/115	-
22	CLA	B	850	-	1/1/11/20	6/13/91/115	-
25	BCR	2	301	-	-	4/29/63/63	0/2/2/2
22	CLA	Z	201	32	1/1/11/20	6/13/91/115	-
22	CLA	A	819	32	1/1/15/20	9/37/115/115	-
25	BCR	L	206	-	-	2/29/63/63	0/2/2/2
22	CLA	B	833	32	1/1/15/20	5/37/115/115	-
31	RRX	6	318	-	-	1/29/65/65	0/2/2/2
22	CLA	B	836	2	1/1/11/20	3/16/94/115	-
22	CLA	A	822	1	-	5/25/103/115	-
29	5X6	2	314	-	-	15/29/67/67	0/2/2/2
21	CL0	A	801	1	3/3/20/25	3/37/135/135	-
29	5X6	2	312	-	-	18/29/67/67	0/2/2/2
22	CLA	3	305	16	1/1/13/20	9/25/103/115	-
24	LHG	4	318	22	-	13/36/36/53	-
22	CLA	1	310	32	1/1/15/20	16/37/115/115	-
22	CLA	3	301	16	1/1/15/20	10/37/115/115	-
22	CLA	2	311	15	1/1/11/20	6/13/91/115	-

The worst 5 of 3556 bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
22	K	101	CLA	C3B-C2B	7.11	1.50	1.40
22	4	302	CLA	C3B-C2B	6.96	1.50	1.40
22	2	305	CLA	C3B-C2B	6.92	1.50	1.40
22	2	303	CLA	C3B-C2B	6.83	1.49	1.40
22	1	306	CLA	C3B-C2B	6.79	1.49	1.40

The worst 5 of 5684 bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
29	7	317	5X6	C01-C02-C03	-13.80	109.03	124.53
29	7	314	5X6	C38-C30-C29	-12.80	110.15	124.53
29	1	311	5X6	C01-C02-C03	-12.17	110.86	124.53
29	M	101	5X6	C38-C30-C29	-12.08	110.97	124.53
29	3	306	5X6	C01-C02-C03	-11.94	111.12	124.53

5 of 157 chirality outliers are listed below:

Mol	Chain	Res	Type	Atom
21	A	801	CL0	ND
21	A	801	CL0	NA
21	A	801	CL0	NC
22	A	802	CLA	ND
22	A	803	CLA	ND

5 of 1937 torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
22	A	816	CLA	C3A-C2A-CAA-CBA
22	A	820	CLA	C3A-C2A-CAA-CBA
22	A	822	CLA	CHA-CBD-CGD-O1D
22	A	822	CLA	CHA-CBD-CGD-O2D
22	A	828	CLA	CHA-CBD-CGD-O1D

There are no ring outliers.

150 monomers are involved in 214 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
25	4	316	BCR	2	0
22	B	819	CLA	1	0
22	4	311	CLA	2	0
25	L	201	BCR	1	0
22	2	306	CLA	1	0
22	B	810	CLA	1	0
22	O	204	CLA	1	0
22	7	312	CLA	1	0
22	F	206	CLA	1	0
22	7	306	CLA	2	0
31	1	315	RRX	3	0
22	A	803	CLA	1	0
22	1	305	CLA	1	0

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Mol	Chain	Res	Type	Clashes	Symm-Clashes
22	A	816	CLA	4	0
22	7	308	CLA	1	0
22	3	303	CLA	1	0
22	B	813	CLA	1	0
22	4	310	CLA	3	0
22	6	303	CLA	1	0
22	A	831	CLA	1	0
22	A	814	CLA	2	0
25	B	844	BCR	2	0
22	A	857	CLA	2	0
22	2	302	CLA	5	0
25	A	844	BCR	1	0
22	L	203	CLA	1	0
22	7	307	CLA	1	0
22	5	307	CLA	1	0
22	L	205	CLA	2	0
25	A	846	BCR	2	0
22	O	205	CLA	1	0
22	2	309	CLA	1	0
22	4	309	CLA	2	0
30	O	201	LMT	1	0
31	4	317	RRX	6	0
22	A	827	CLA	1	0
22	A	858	CLA	1	0
25	B	843	BCR	2	0
22	6	313	CLA	1	0
22	2	305	CLA	3	0
22	A	802	CLA	1	0
22	5	310	CLA	1	0
22	7	310	CLA	1	0
22	A	859	CLA	2	0
22	A	839	CLA	1	0
22	B	809	CLA	2	0
22	A	808	CLA	1	0
22	B	802	CLA	3	0
22	A	829	CLA	1	0
25	1	301	BCR	2	0
22	B	817	CLA	1	0
22	B	828	CLA	2	0
22	B	835	CLA	1	0
31	5	322	RRX	2	0
22	1	302	CLA	1	0

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Mol	Chain	Res	Type	Clashes	Symm-Clashes
22	B	827	CLA	1	0
25	A	861	BCR	4	0
22	A	830	CLA	2	0
22	A	815	CLA	1	0
22	1	309	CLA	1	0
22	3	304	CLA	1	0
22	4	306	CLA	1	0
25	K	103	BCR	4	0
22	B	806	CLA	3	0
25	L	202	BCR	1	0
22	B	838	CLA	2	0
22	6	311	CLA	1	0
22	J	102	CLA	1	0
22	B	801	CLA	2	0
22	5	304	CLA	1	0
22	7	304	CLA	1	0
22	K	102	CLA	2	0
28	B	845	DGD	1	0
22	B	849	CLA	1	0
22	B	820	CLA	1	0
22	A	809	CLA	2	0
22	1	308	CLA	1	0
22	1	306	CLA	1	0
22	B	811	CLA	1	0
22	6	312	CLA	1	0
22	6	308	CLA	1	0
22	2	307	CLA	1	0
22	2	304	CLA	1	0
25	A	862	BCR	2	0
22	4	307	CLA	2	0
22	B	812	CLA	5	0
25	F	207	BCR	2	0
22	2	308	CLA	1	0
22	B	823	CLA	1	0
25	B	841	BCR	4	0
22	7	313	CLA	1	0
22	B	834	CLA	1	0
22	F	205	CLA	2	0
22	B	822	CLA	2	0
22	7	311	CLA	2	0
22	B	839	CLA	1	0
22	B	824	CLA	1	0

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Mol	Chain	Res	Type	Clashes	Symm-Clashes
22	A	817	CLA	1	0
25	A	843	BCR	2	0
22	5	309	CLA	1	0
22	B	825	CLA	1	0
25	5	315	BCR	1	0
22	5	305	CLA	1	0
22	6	306	CLA	1	0
22	4	312	CLA	1	0
22	Z	204	CLA	3	0
25	F	201	BCR	3	0
22	7	303	CLA	4	0
22	F	204	CLA	1	0
22	O	203	CLA	1	0
22	5	301	CLA	1	0
25	J	103	BCR	1	0
22	6	314	CLA	1	0
22	A	807	CLA	1	0
25	B	842	BCR	2	0
22	B	831	CLA	1	0
22	A	837	CLA	3	0
22	B	821	CLA	1	0
22	A	838	CLA	1	0
22	A	804	CLA	1	0
24	J	106	LHG	1	0
22	B	803	CLA	4	0
22	2	310	CLA	2	0
22	B	837	CLA	1	0
25	I	102	BCR	1	0
22	6	309	CLA	1	0
25	Z	205	BCR	4	0
22	5	308	CLA	1	0
22	B	808	CLA	2	0
22	A	821	CLA	1	0
22	1	303	CLA	1	0
22	7	309	CLA	1	0
22	A	833	CLA	1	0
22	1	307	CLA	1	0
22	6	307	CLA	2	0
22	4	305	CLA	1	0
22	B	818	CLA	1	0
22	B	804	CLA	1	0
22	B	850	CLA	1	0

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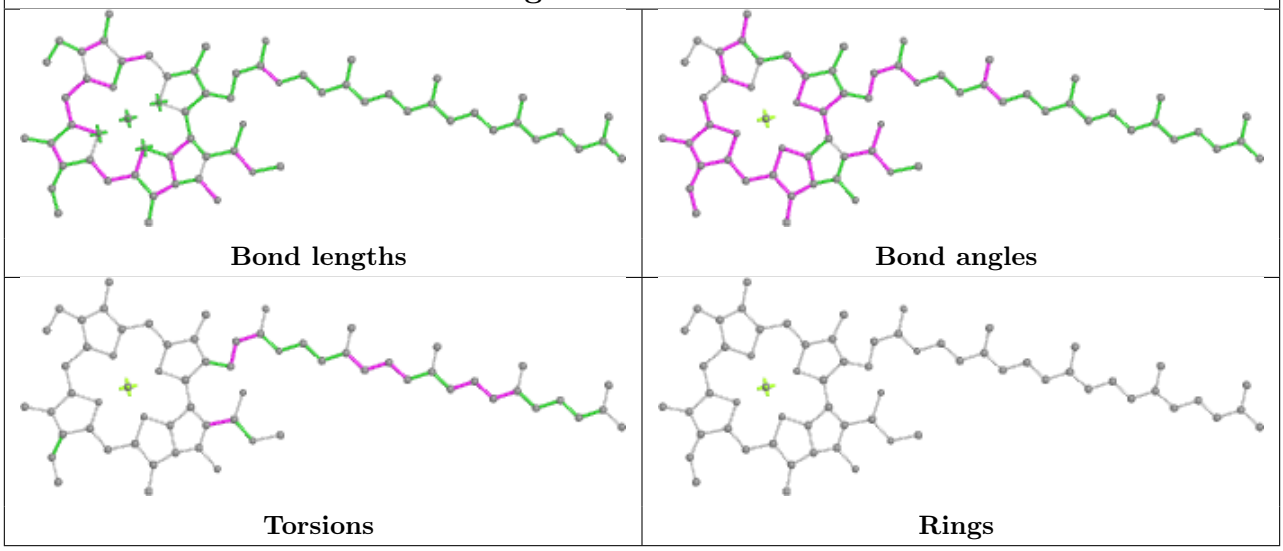
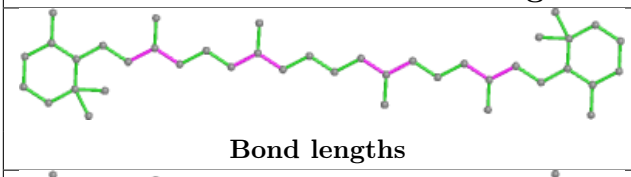
Mol	Chain	Res	Type	Clashes	Symm-Clashes
22	Z	201	CLA	2	0
25	L	206	BCR	1	0
22	B	833	CLA	2	0
31	6	318	RRX	3	0
22	A	822	CLA	1	0
22	B	836	CLA	1	0
21	A	801	CL0	1	0
22	3	305	CLA	1	0
24	4	318	LHG	1	0
22	3	301	CLA	1	0
22	2	311	CLA	1	0

The following is a two-dimensional graphical depiction of Mogul quality analysis of bond lengths, bond angles, torsion angles, and ring geometry for all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the validation Tables will also be included. For torsion angles, if less then 5% of the Mogul distribution of torsion angles is within 10 degrees of the torsion angle in question, then that torsion angle is considered an outlier. Any bond that is central to one or more torsion angles identified as an outlier by Mogul will be highlighted in the graph. For rings, the root-mean-square deviation (RMSD) between the ring in question and similar rings identified by Mogul is calculated over all ring torsion angles. If the average RMSD is greater than 60 degrees and the minimal RMSD between the ring in question and any Mogul-identified rings is also greater than 60 degrees, then that ring is considered an outlier. The outliers are highlighted in purple. The color gray indicates Mogul did not find sufficient equivalents in the CSD to analyse the geometry.

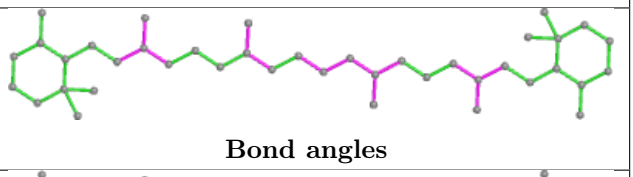
Ligand CLA A 818



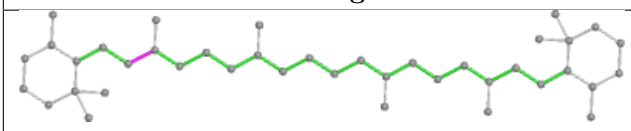
Ligand BCR 4 316



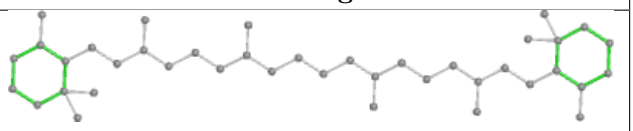
Bond lengths



Bond angles

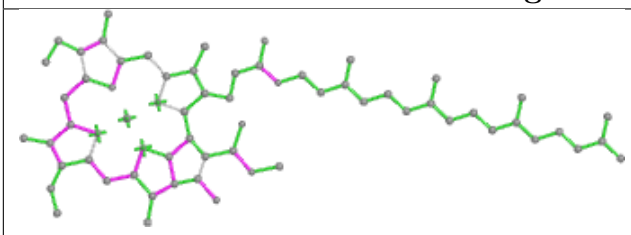


Torsions

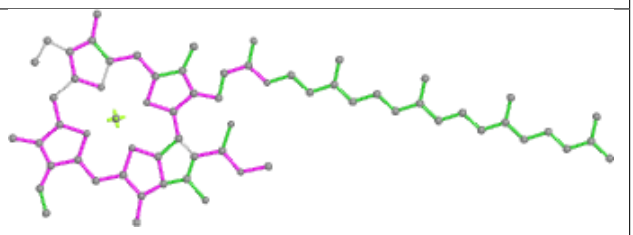


Rings

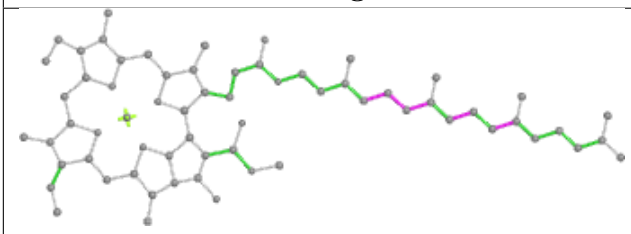
Ligand CLA B 819



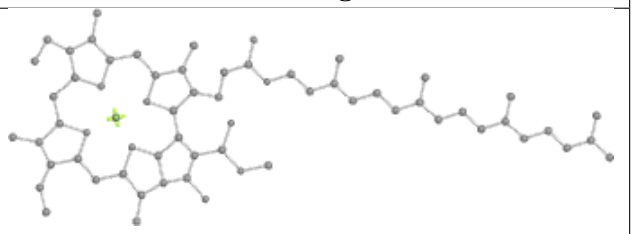
Bond lengths



Bond angles

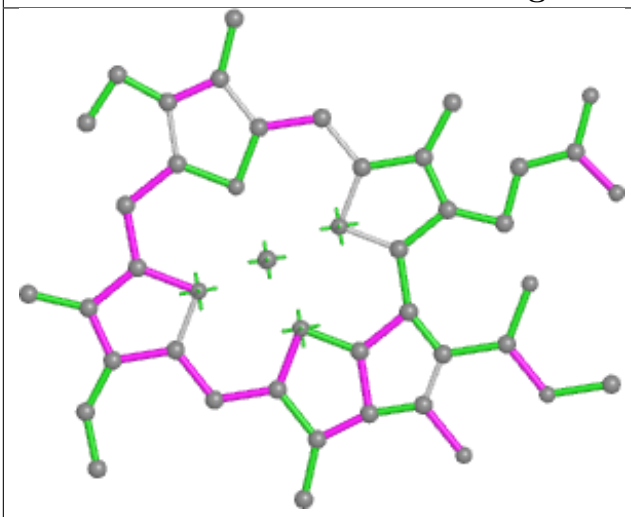


Torsions

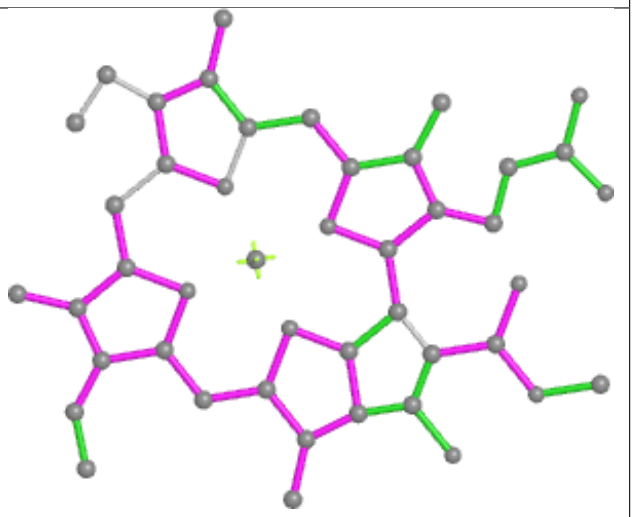


Rings

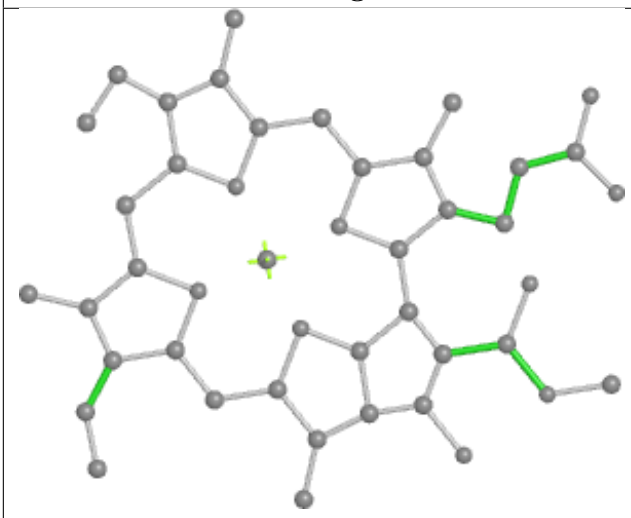
Ligand CLA 4 311



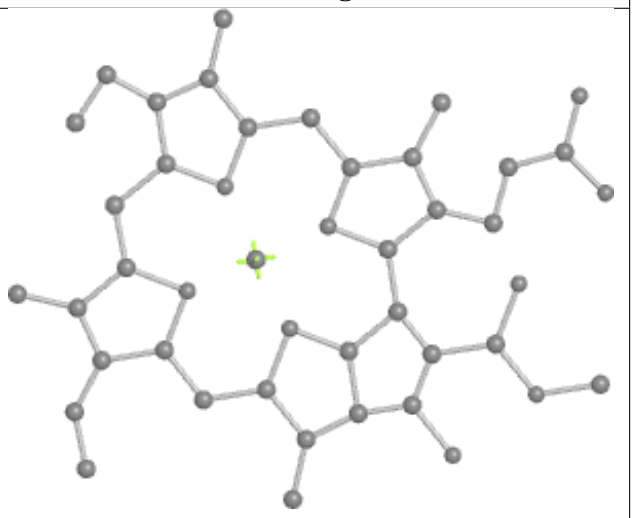
Bond lengths



Bond angles

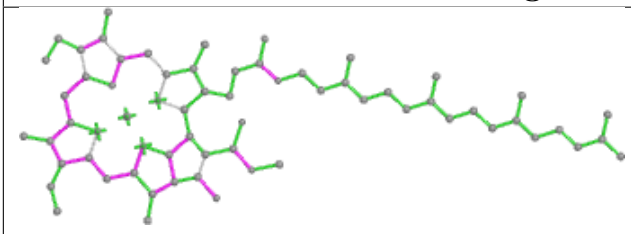


Torsions

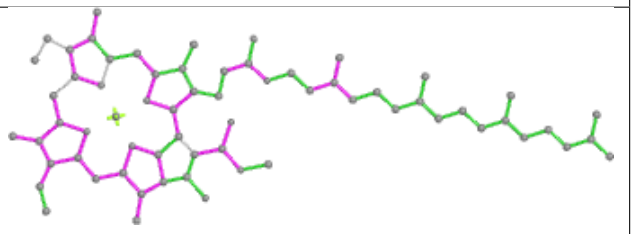


Rings

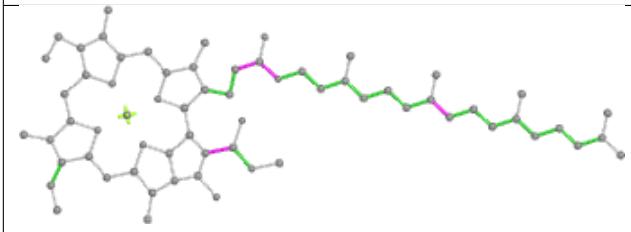
Ligand CLA A 811



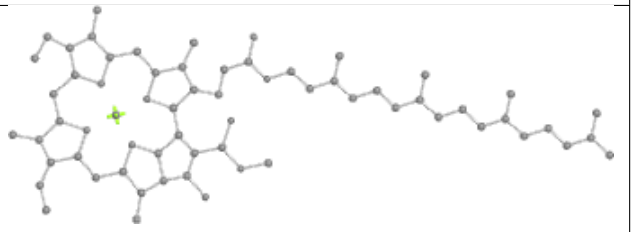
Bond lengths



Bond angles

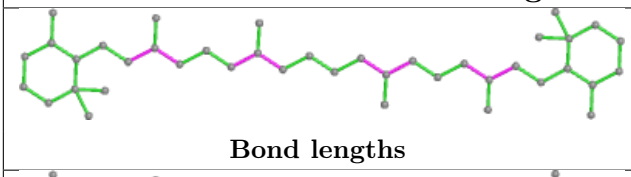


Torsions

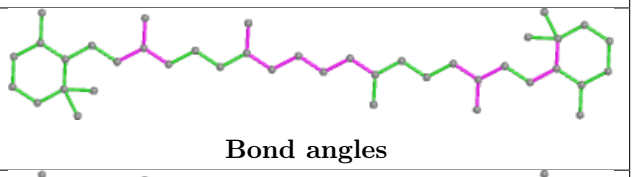


Rings

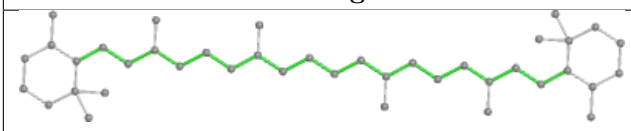
Ligand BCR L 201



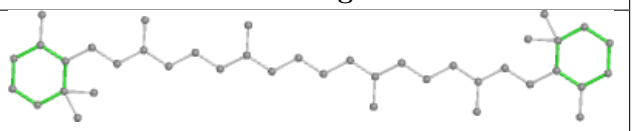
Bond lengths



Bond angles

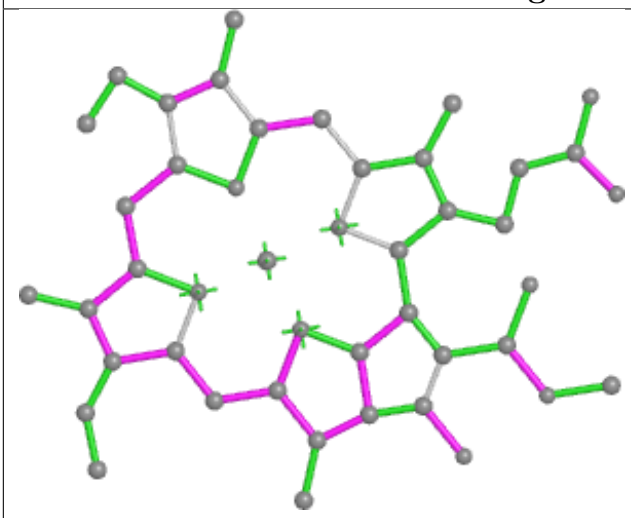


Torsions

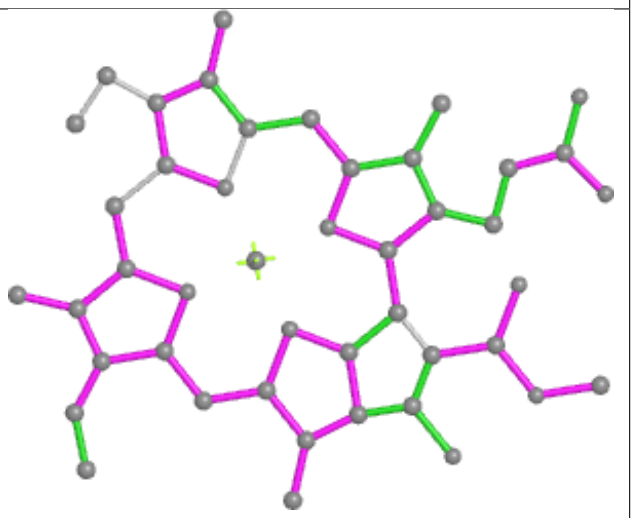


Rings

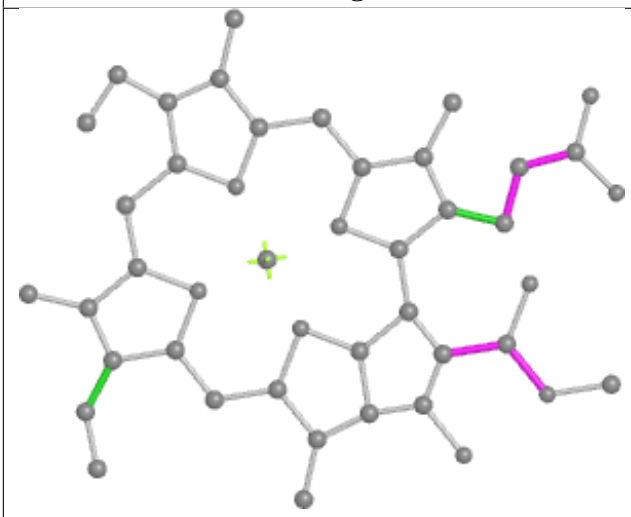
Ligand CLA 2 306



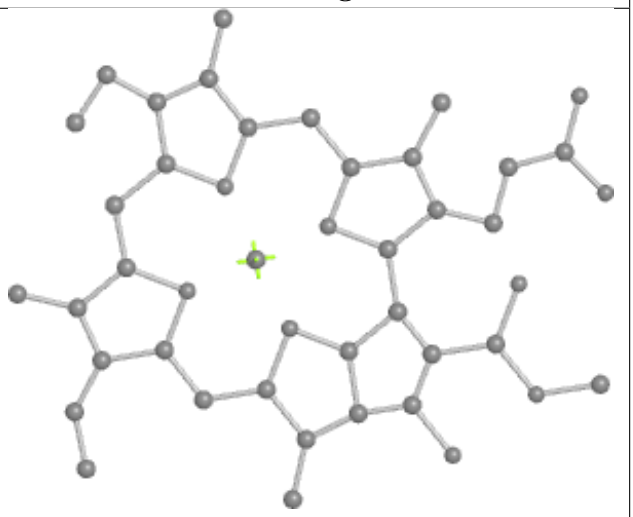
Bond lengths



Bond angles

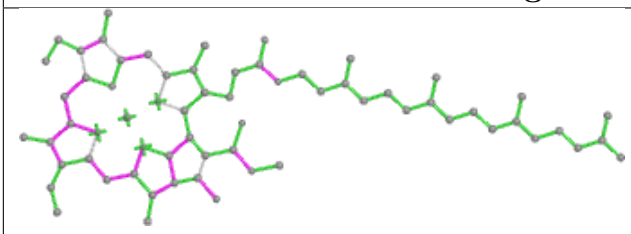


Torsions

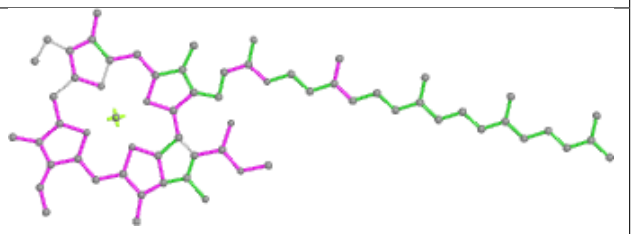


Rings

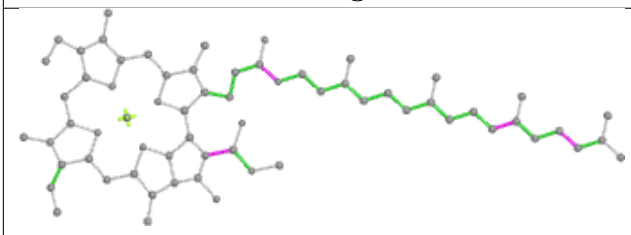
Ligand CLA B 810



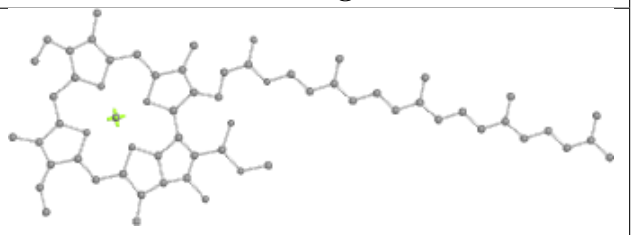
Bond lengths



Bond angles

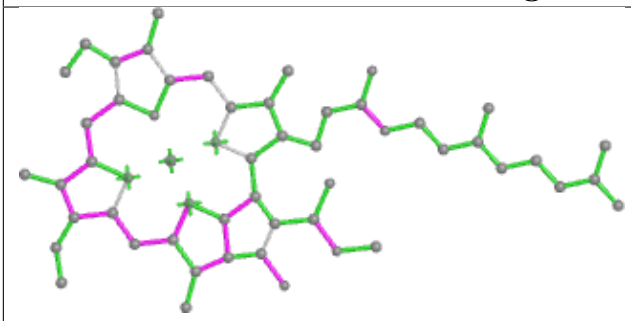


Torsions

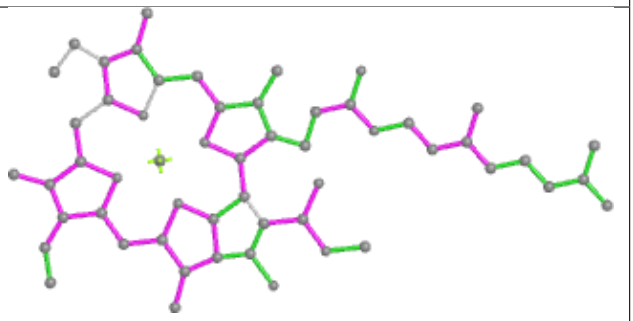


Rings

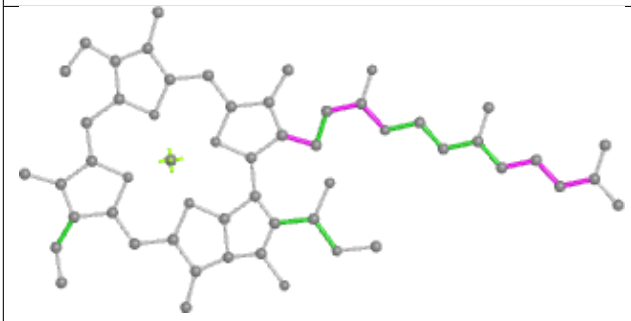
Ligand CLA K 101



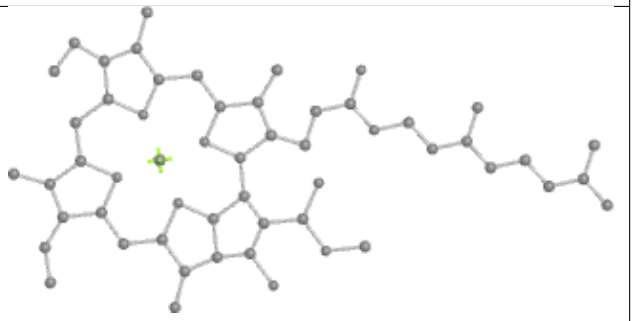
Bond lengths



Bond angles

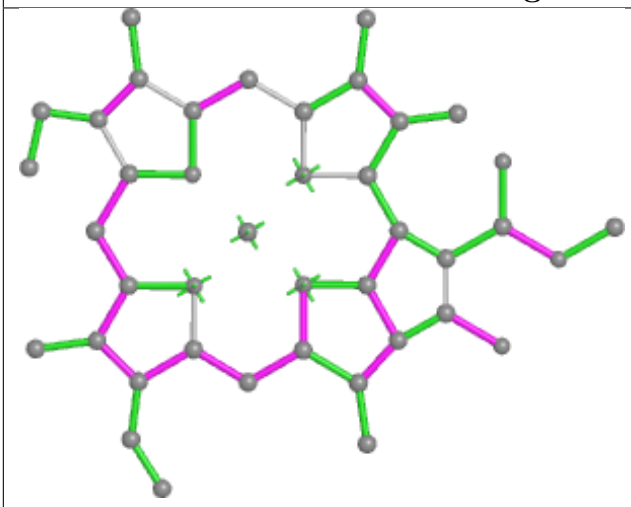


Torsions

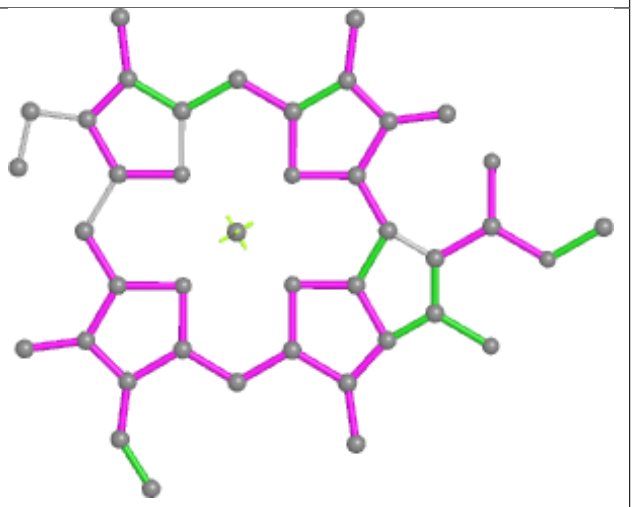


Rings

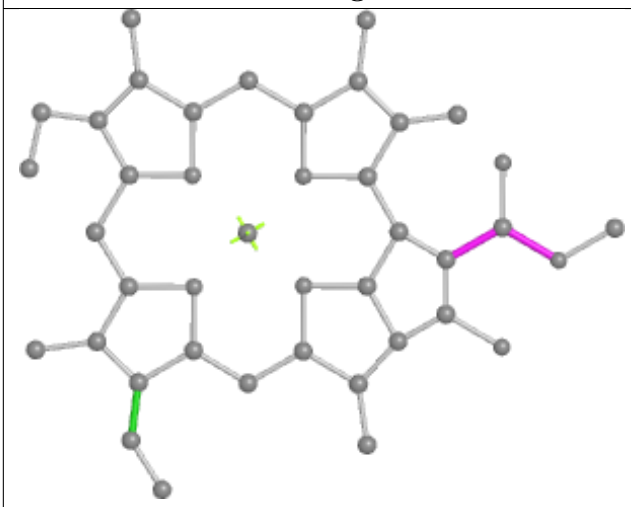
Ligand CLA O 204



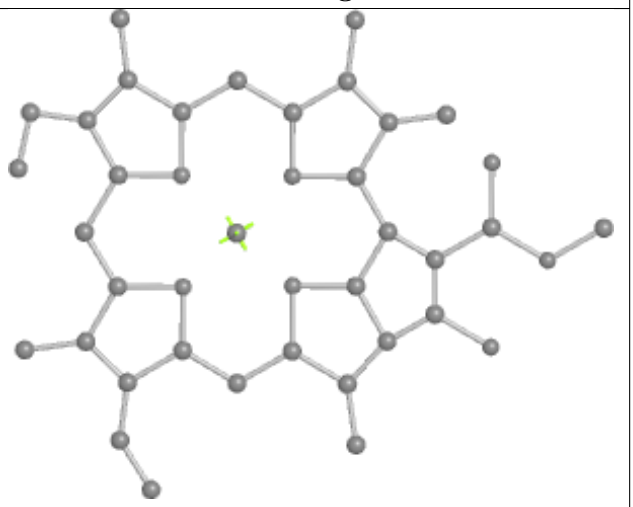
Bond lengths



Bond angles

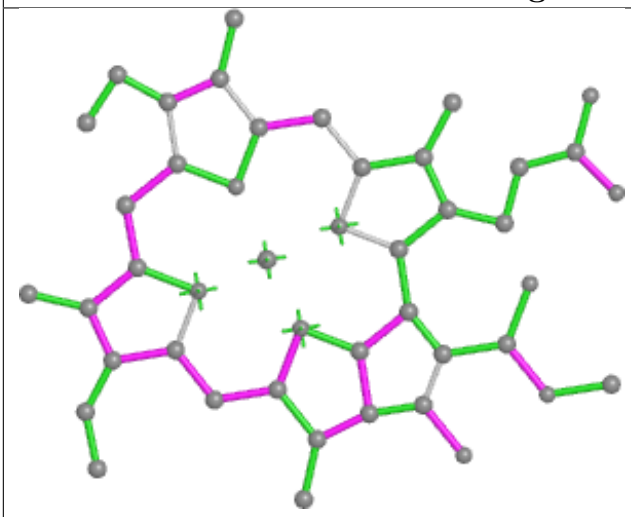


Torsions

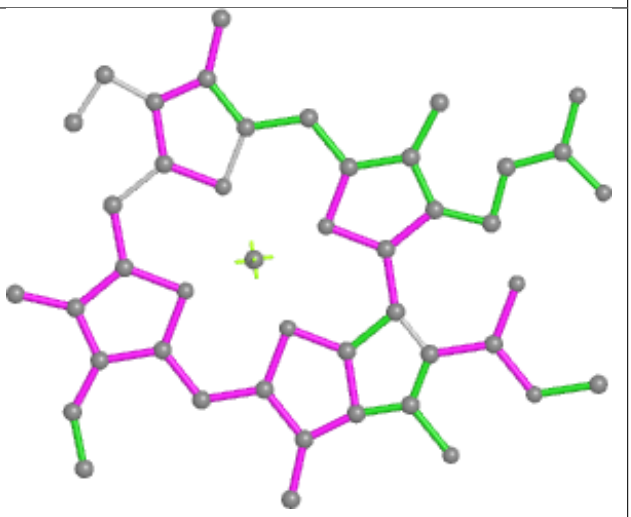


Rings

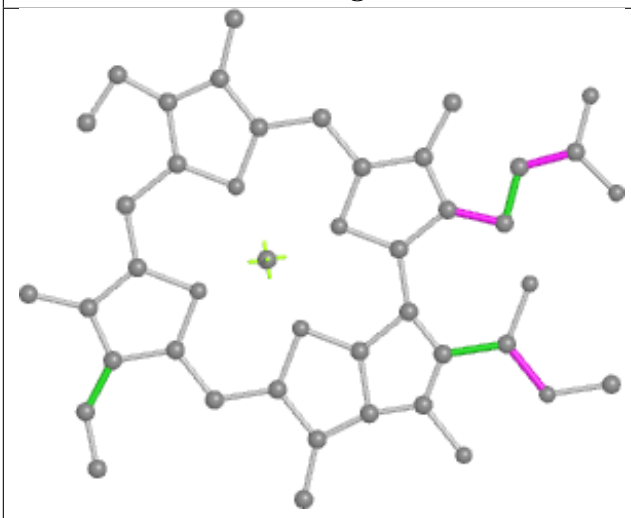
Ligand CLA 7 312



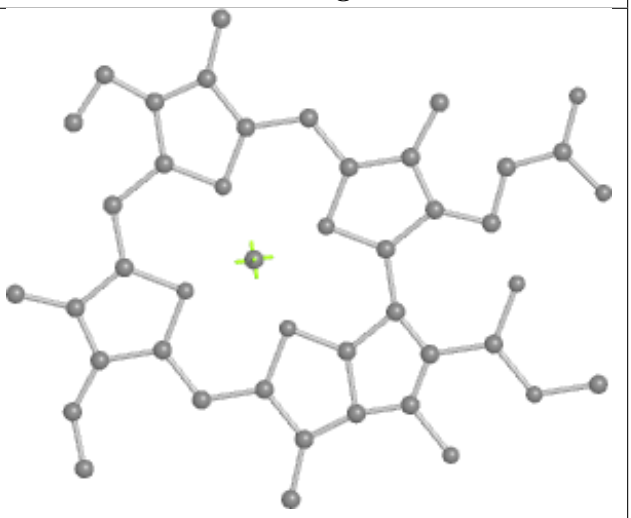
Bond lengths



Bond angles

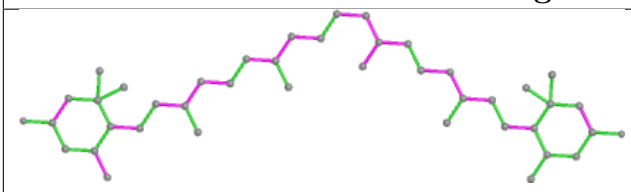


Torsions

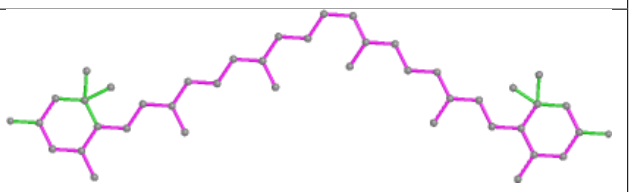


Rings

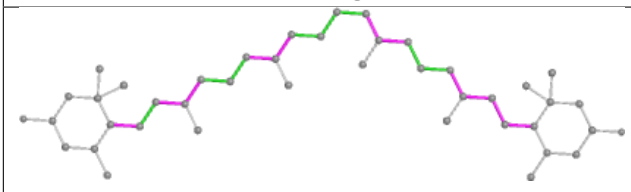
Ligand 5X6 6 316



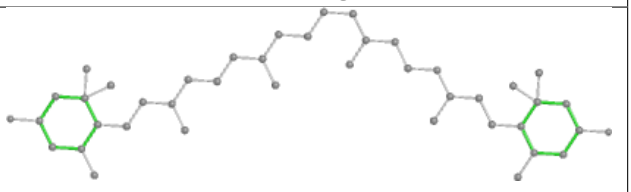
Bond lengths



Bond angles

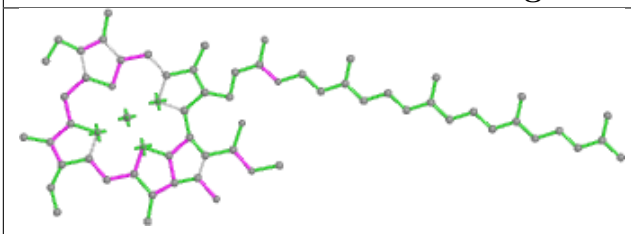


Torsions

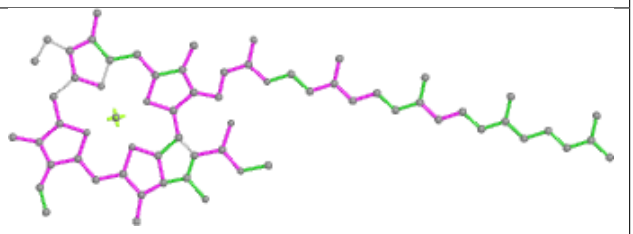


Rings

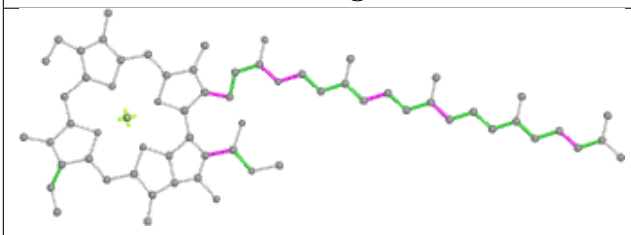
Ligand CLA B 805



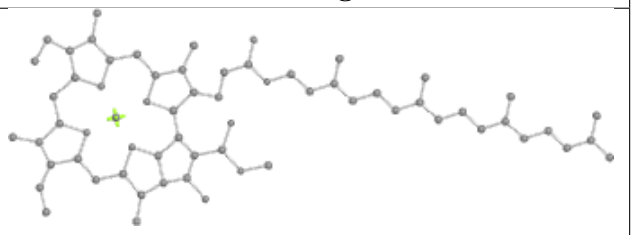
Bond lengths



Bond angles

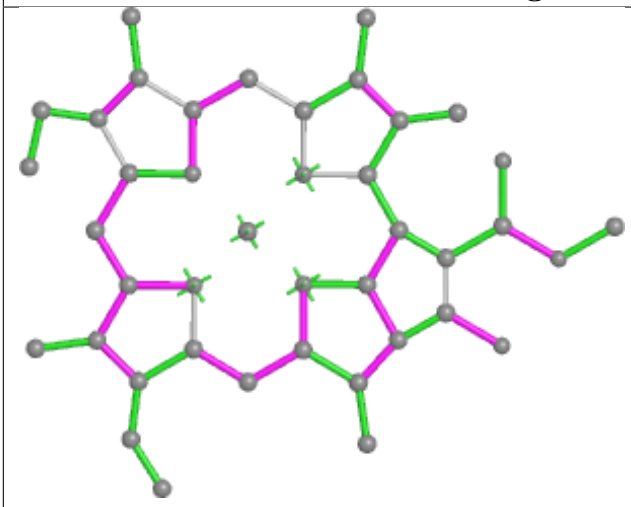


Torsions

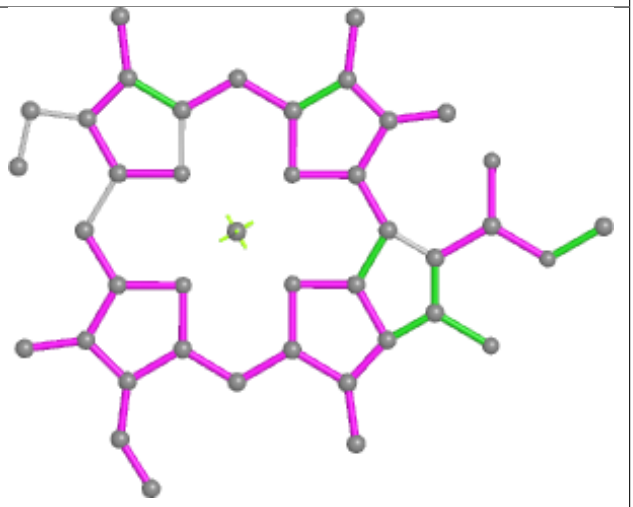


Rings

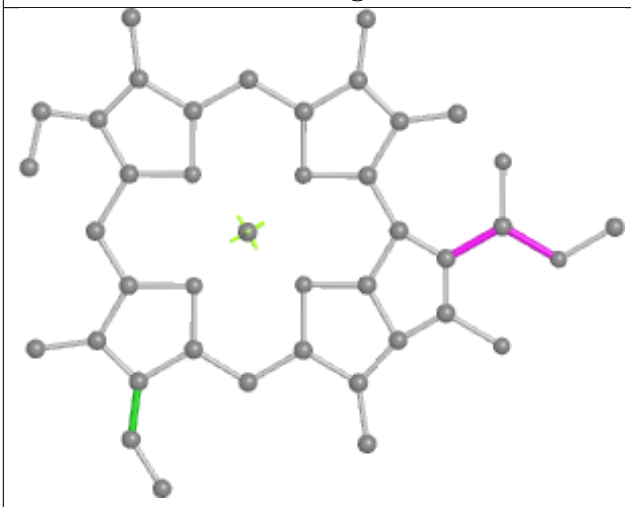
Ligand CLA F 206



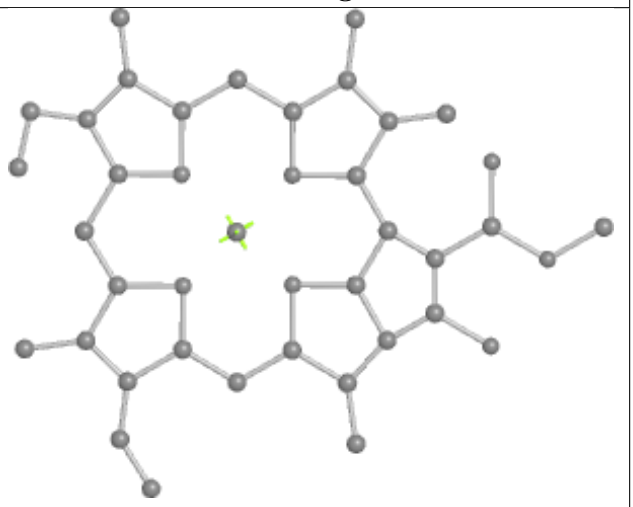
Bond lengths



Bond angles

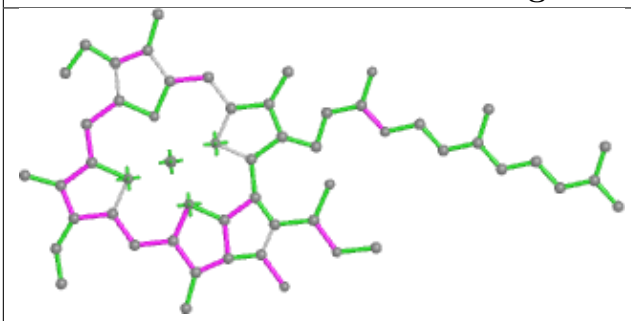


Torsions

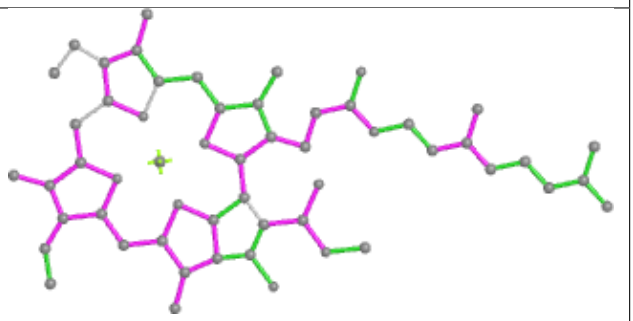


Rings

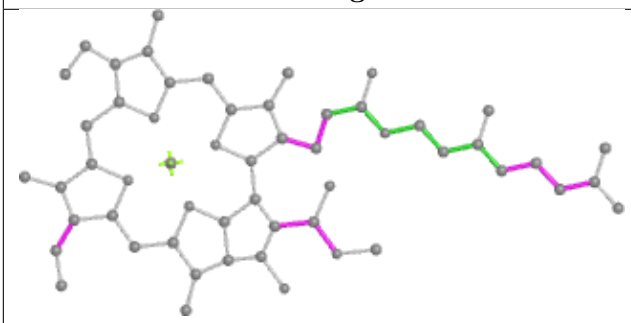
Ligand CLA 7 306



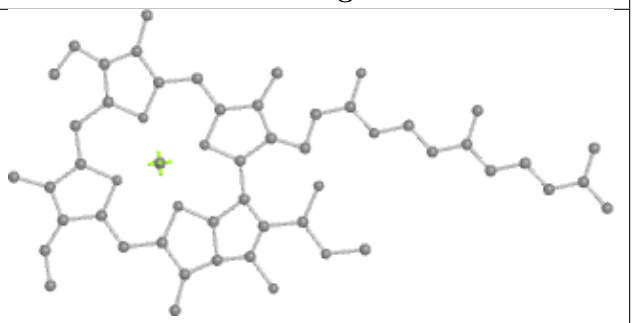
Bond lengths



Bond angles

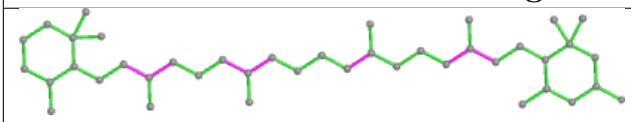


Torsions

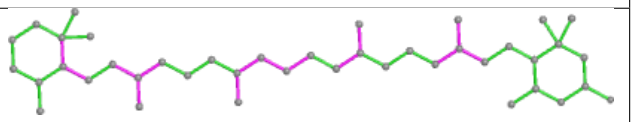


Rings

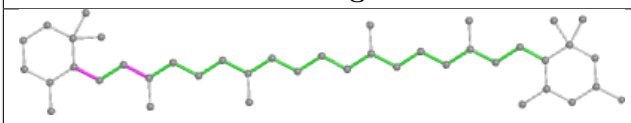
Ligand RRX 1 315



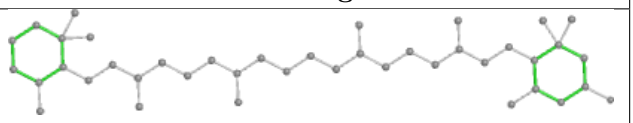
Bond lengths



Bond angles

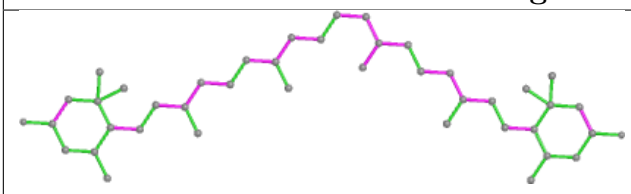


Torsions

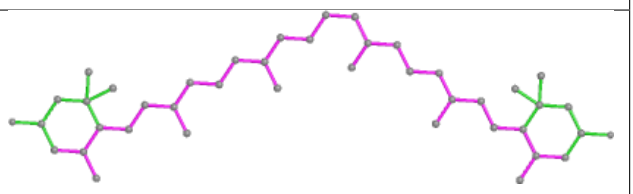


Rings

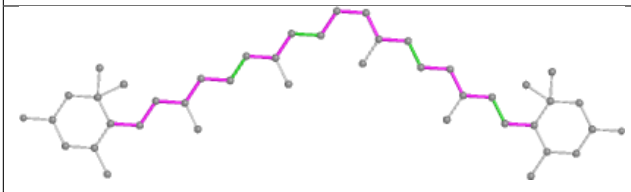
Ligand 5X6 O 208



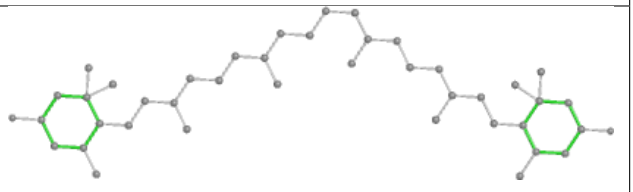
Bond lengths



Bond angles

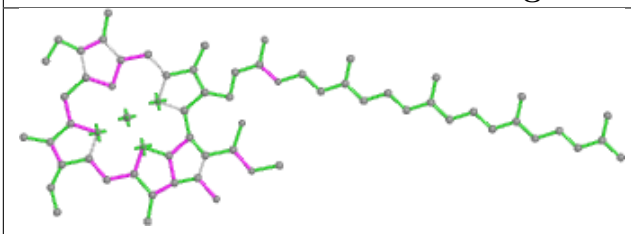


Torsions

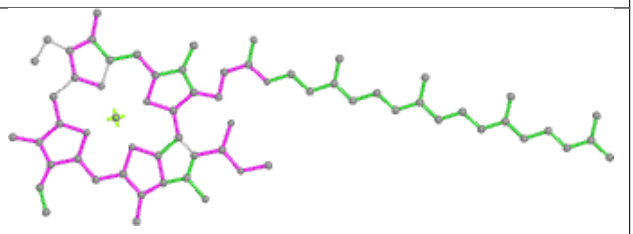


Rings

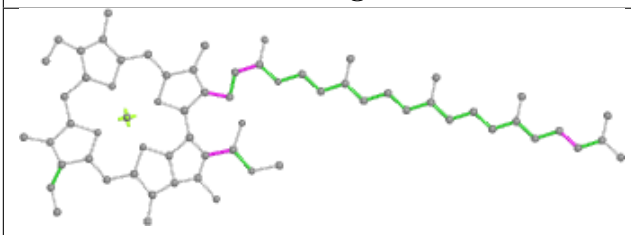
Ligand CLA A 803



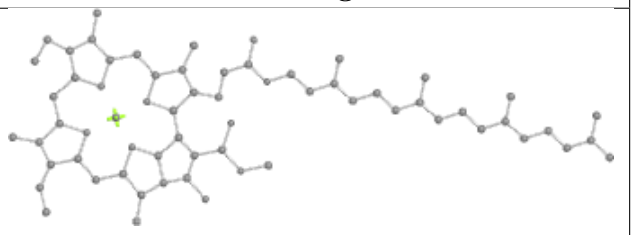
Bond lengths



Bond angles

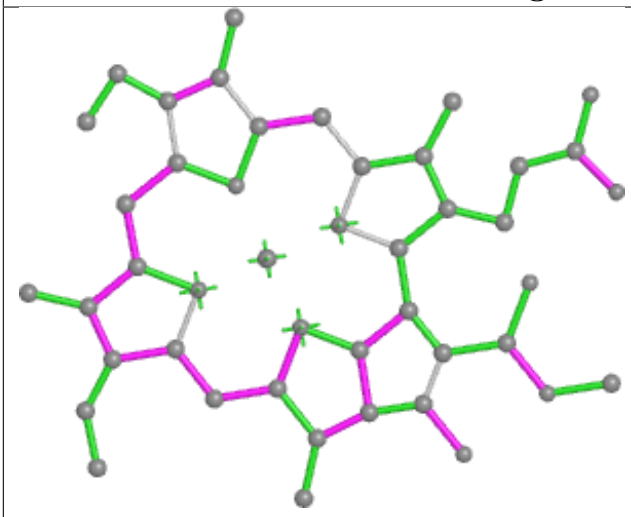


Torsions

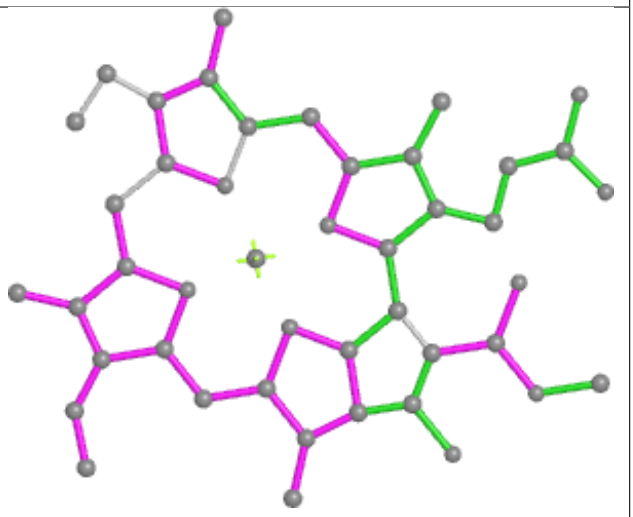


Rings

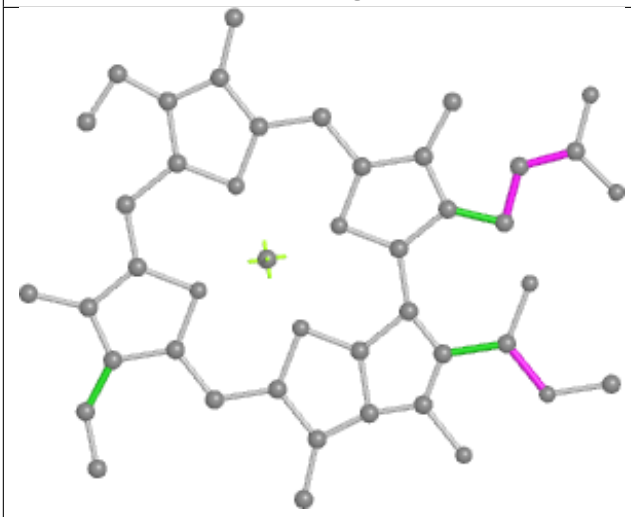
Ligand CLA 1 305



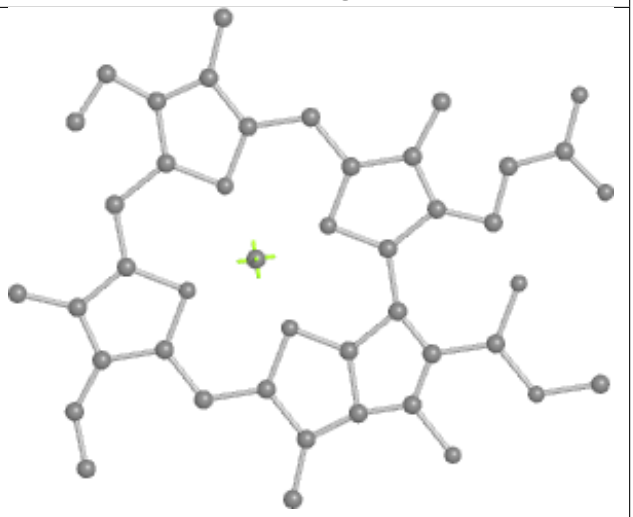
Bond lengths



Bond angles

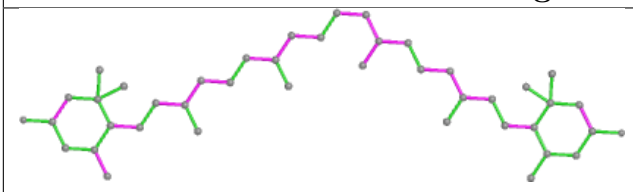


Torsions



Rings

Ligand 5X6 J 104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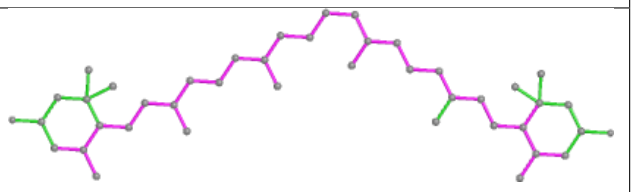
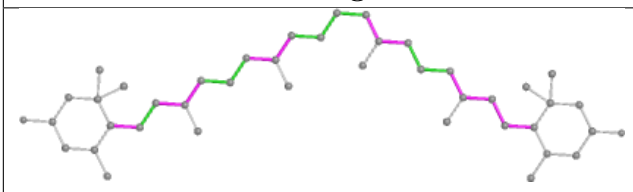
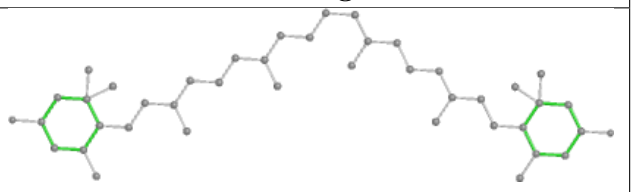
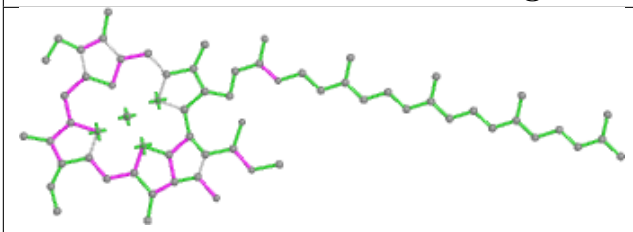
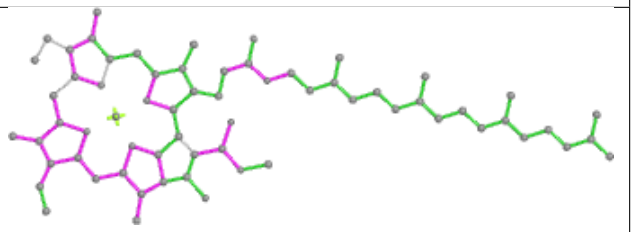

Bond angles

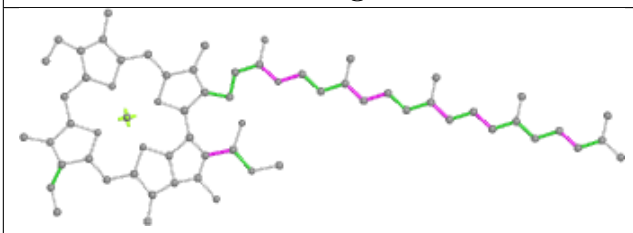

Torsions

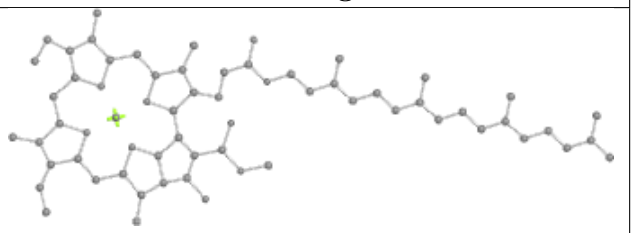

Rings

Ligand CLA A 812

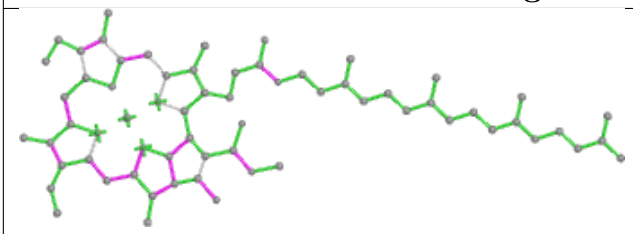

Bond lengths

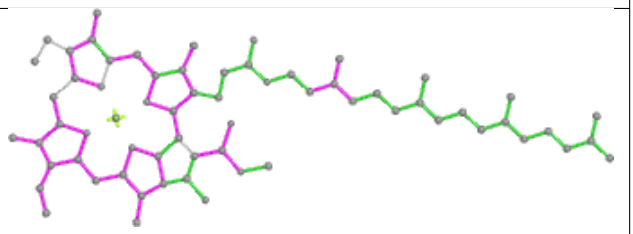

Bond angles

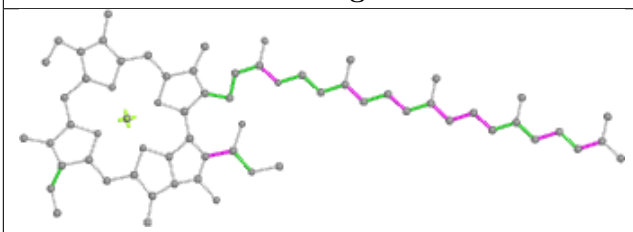

Torsions

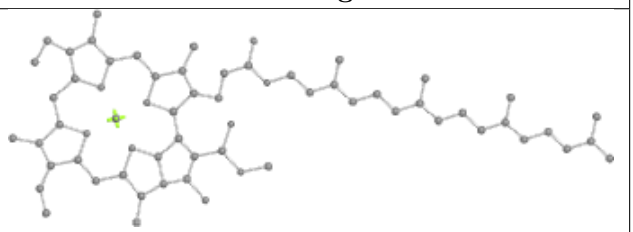

Rings

Ligand CLA A 828

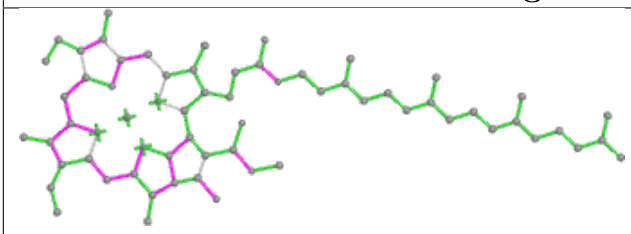

Bond lengths


Bond angles

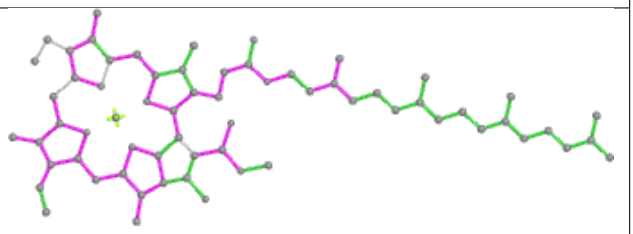

Torsions


Rings

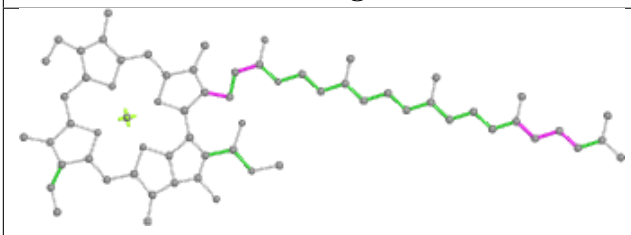
Ligand CLA A 816



Bond lengths



Bond angles



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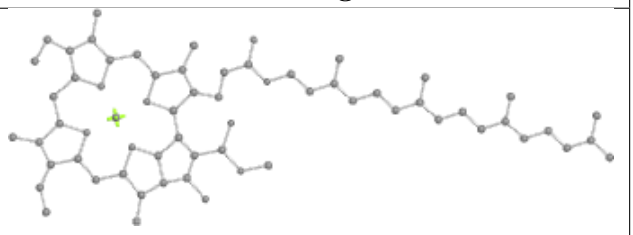
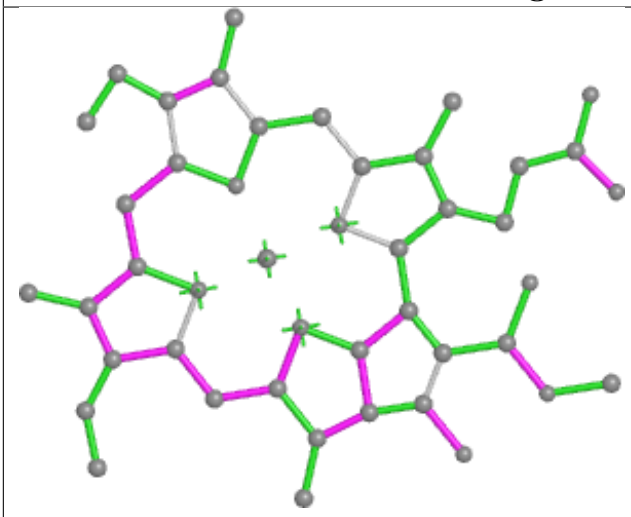
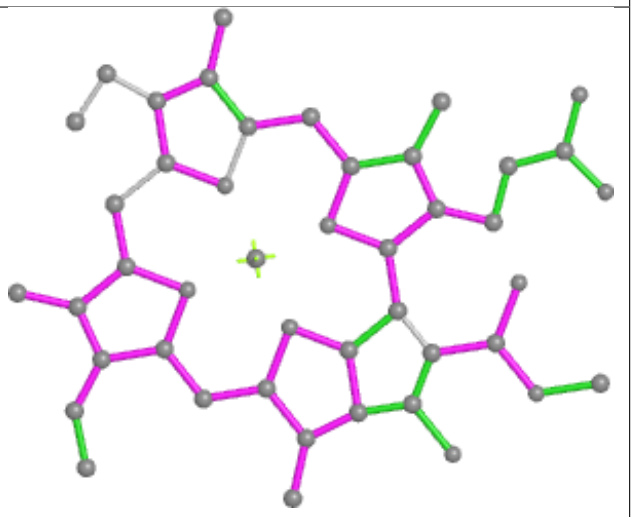


Rings

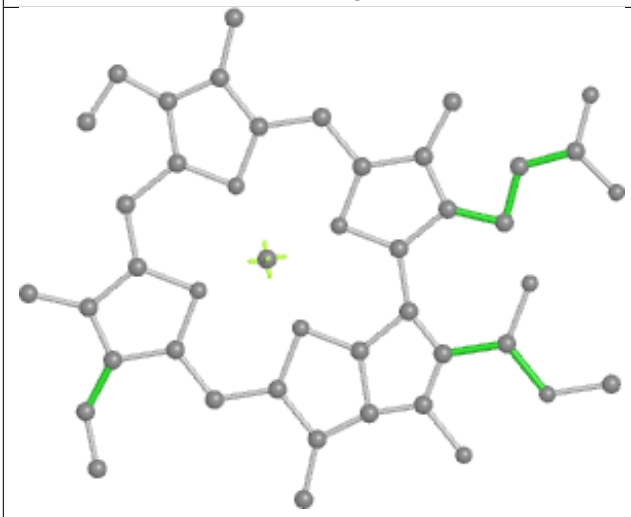
Ligand CLA 7 308



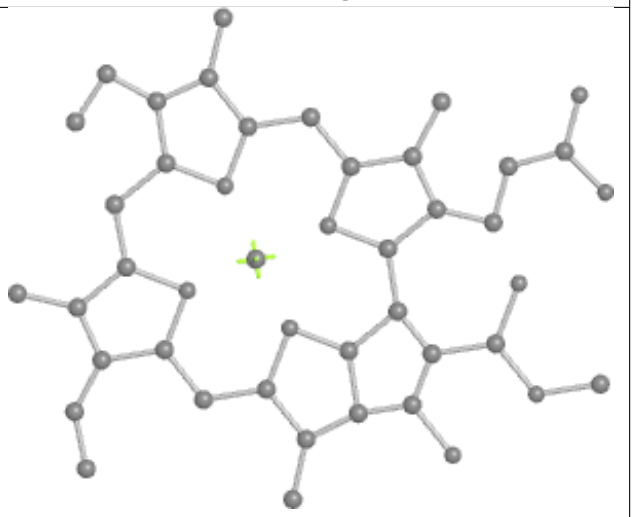
Bond lengths



Bond angles

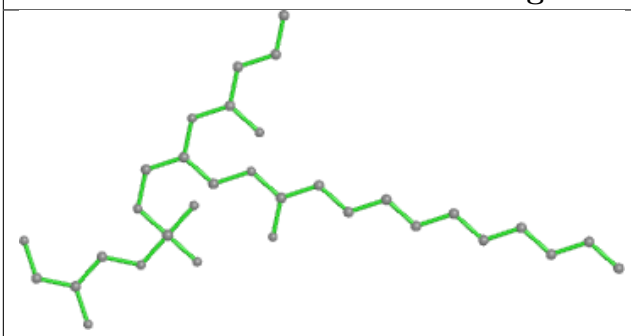


Torsions

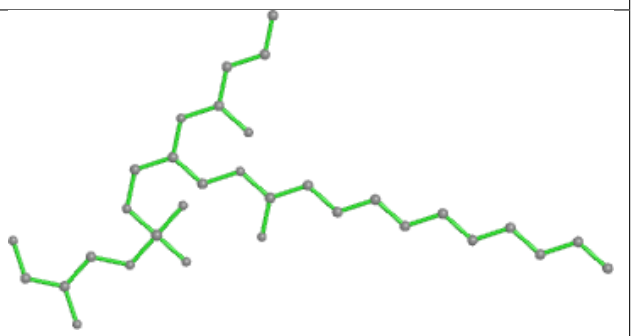


Rings

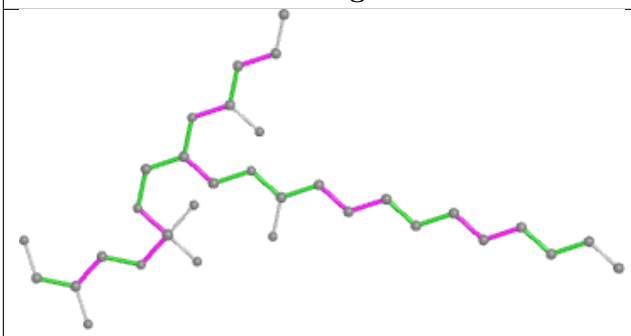
Ligand LHG 6 319



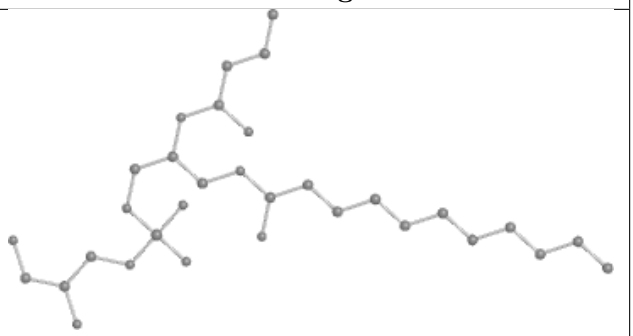
Bond lengths



Bond angles

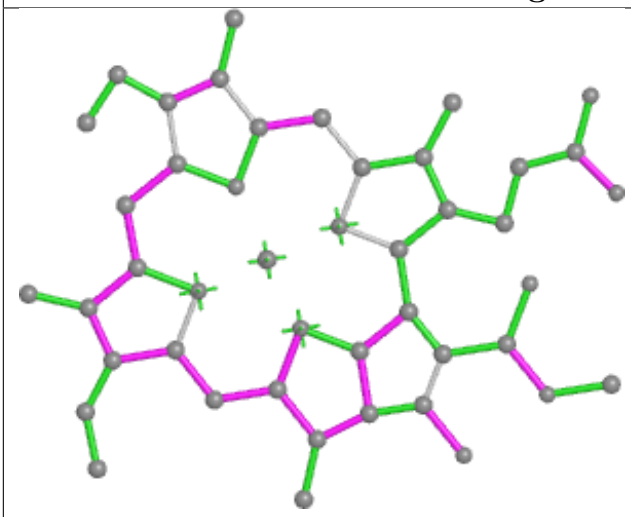


Torsions

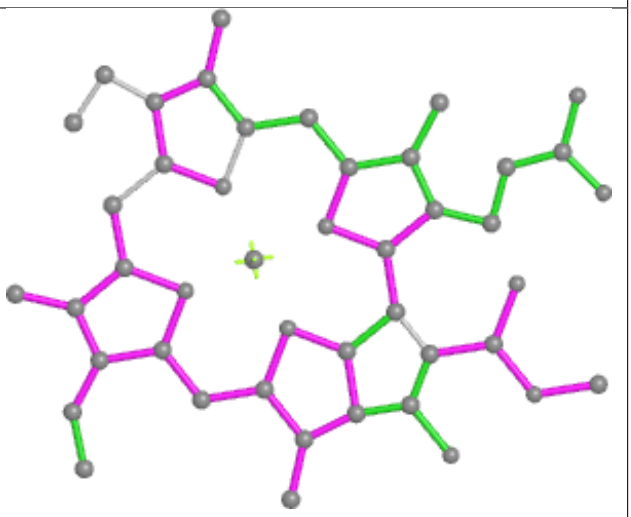


Rings

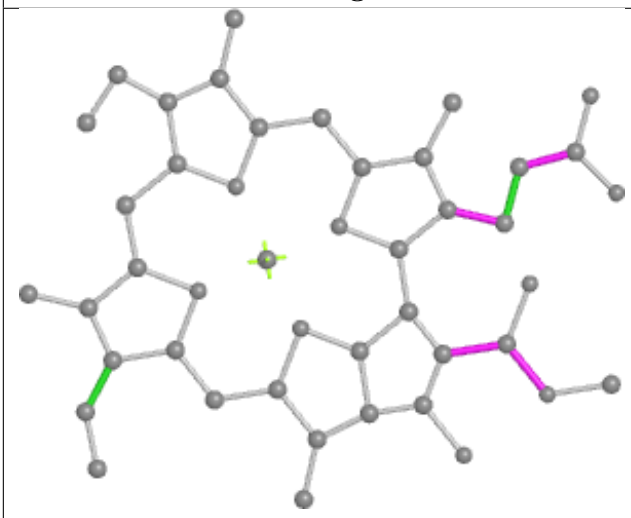
Ligand CLA 3 303



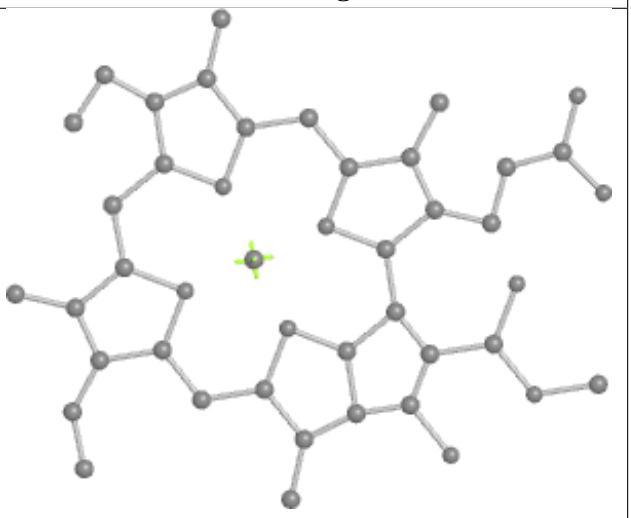
Bond lengths



Bond angles

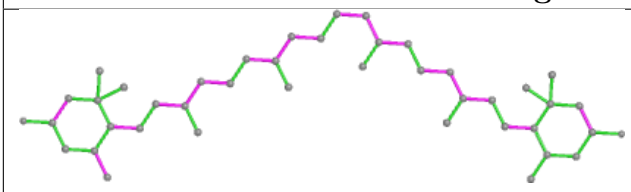


Torsions

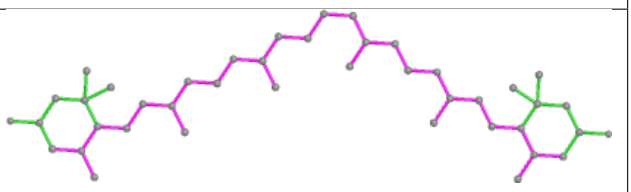


Rings

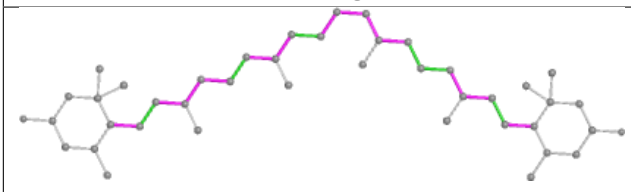
Ligand 5X6 2 313



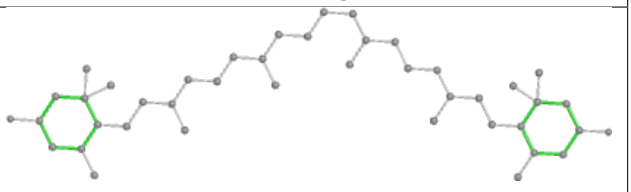
Bond lengths



Bond angles

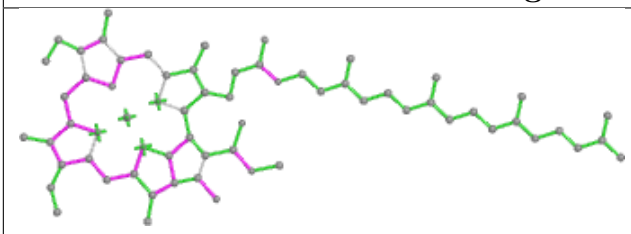


Torsions

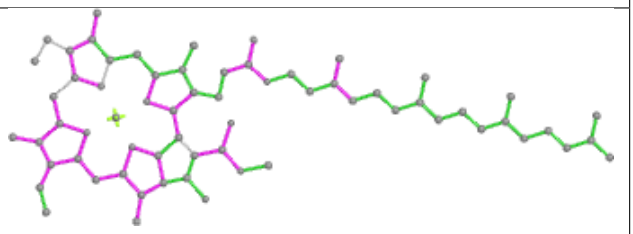


Rings

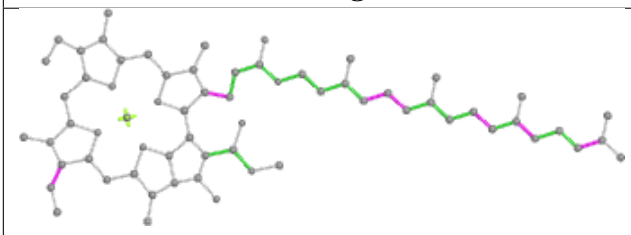
Ligand CLA B 813



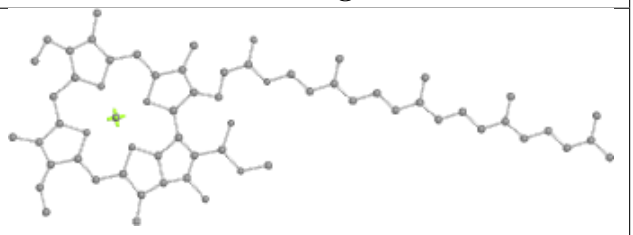
Bond lengths



Bond angles

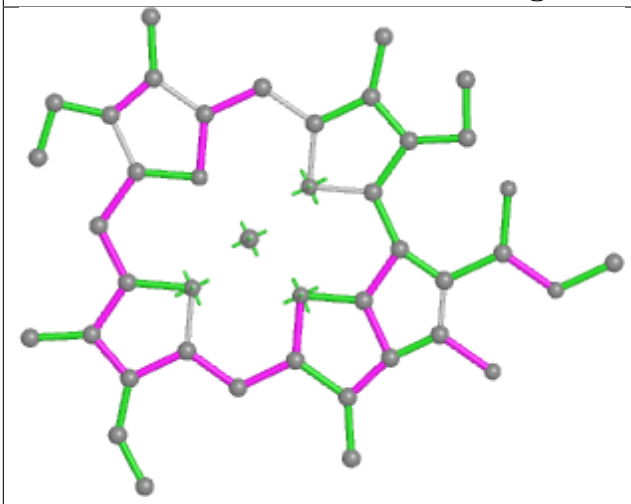


Torsions

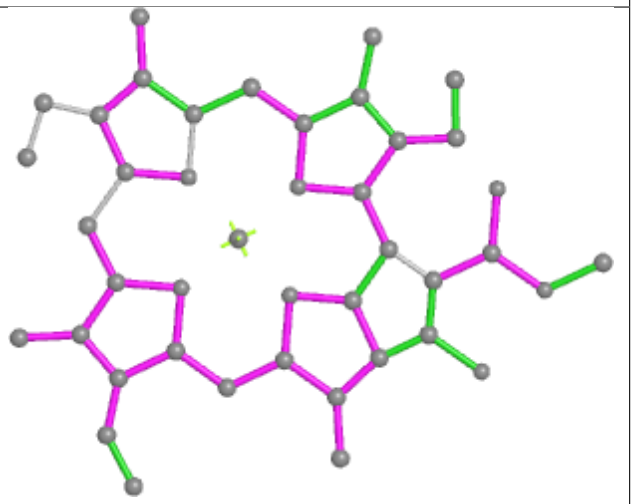


Rings

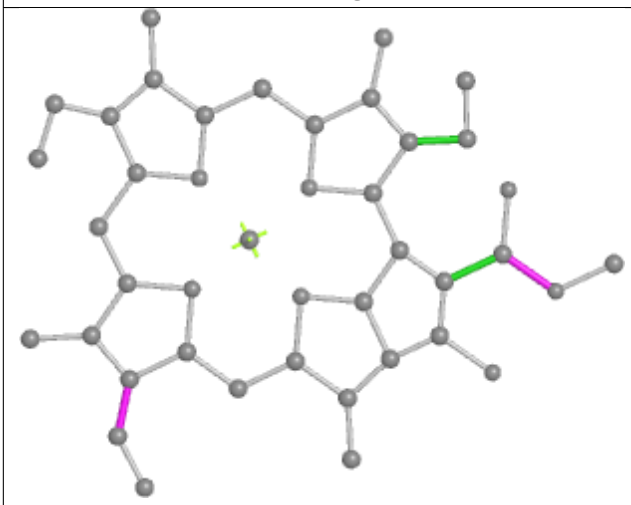
Ligand CLA 4 310



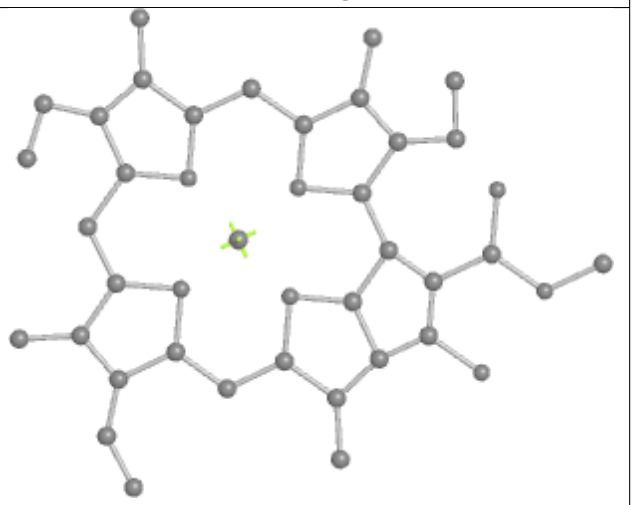
Bond lengths



Bond angles

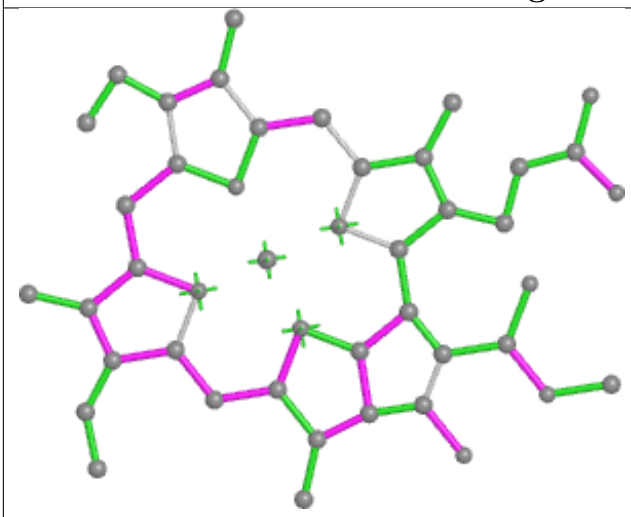


Torsions

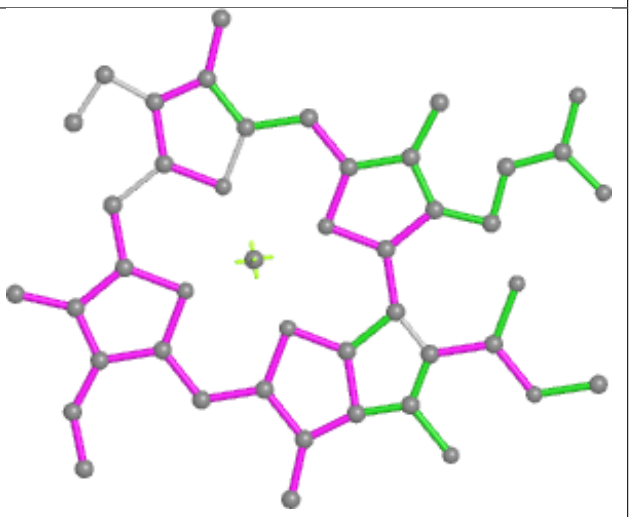


Rings

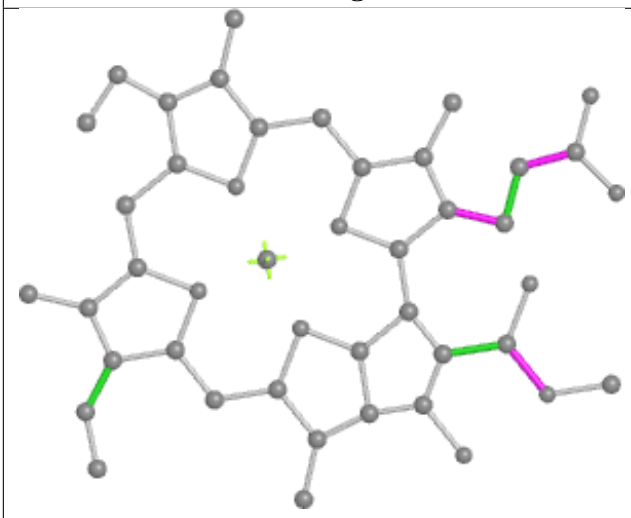
Ligand CLA 6 303



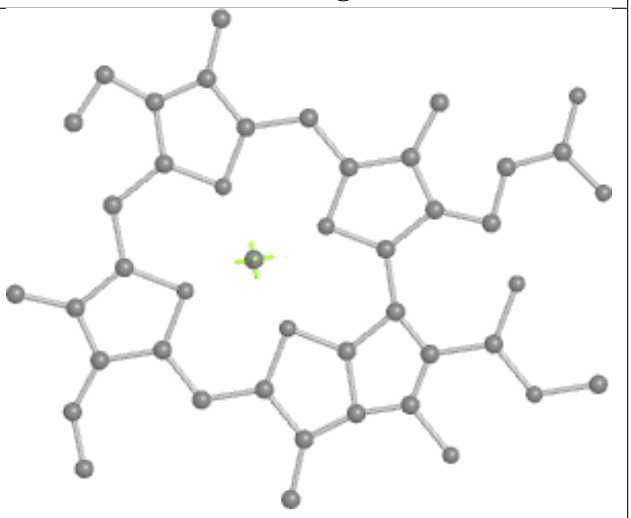
Bond lengths



Bond angles

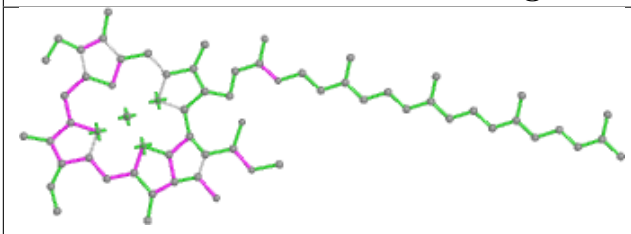


Torsions

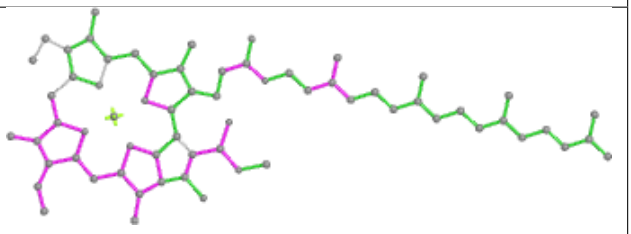


Rings

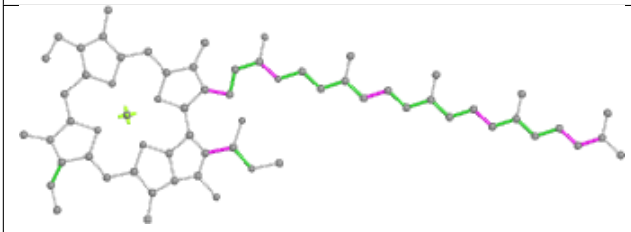
Ligand CLA A 831



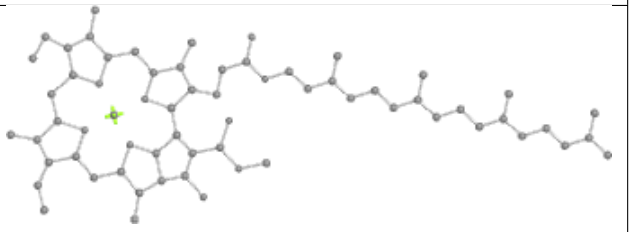
Bond lengths



Bond angles

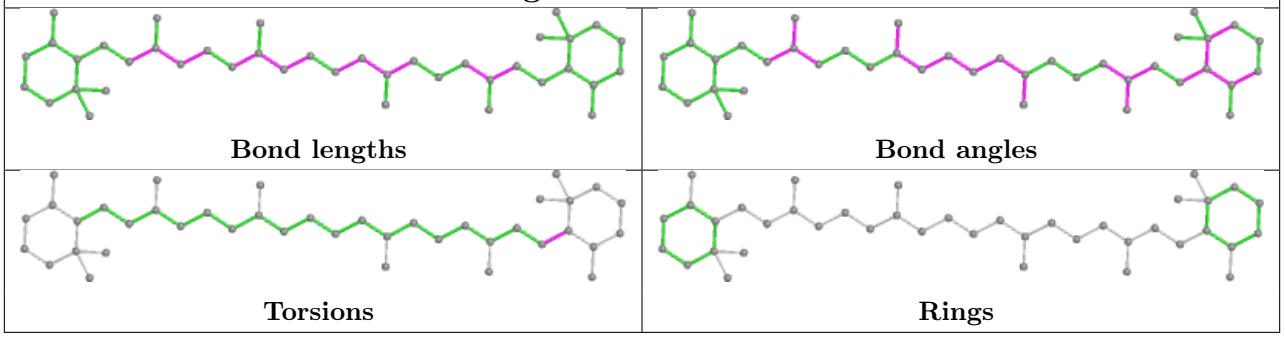


Torsions

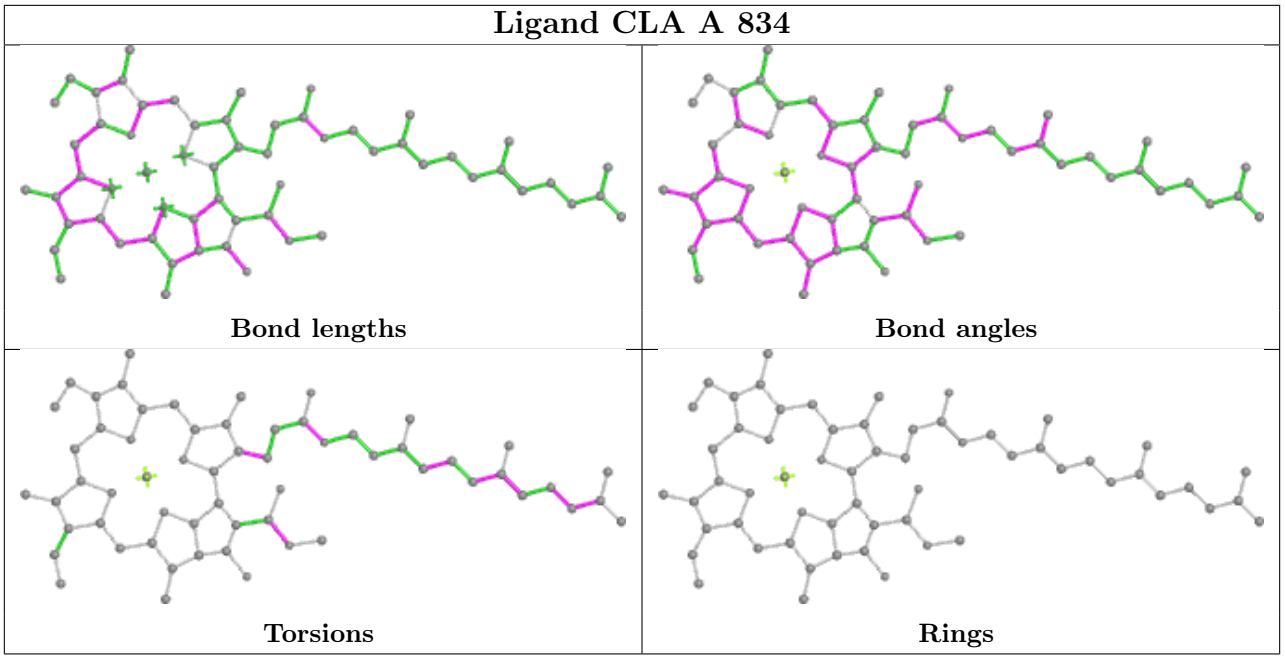


Rings

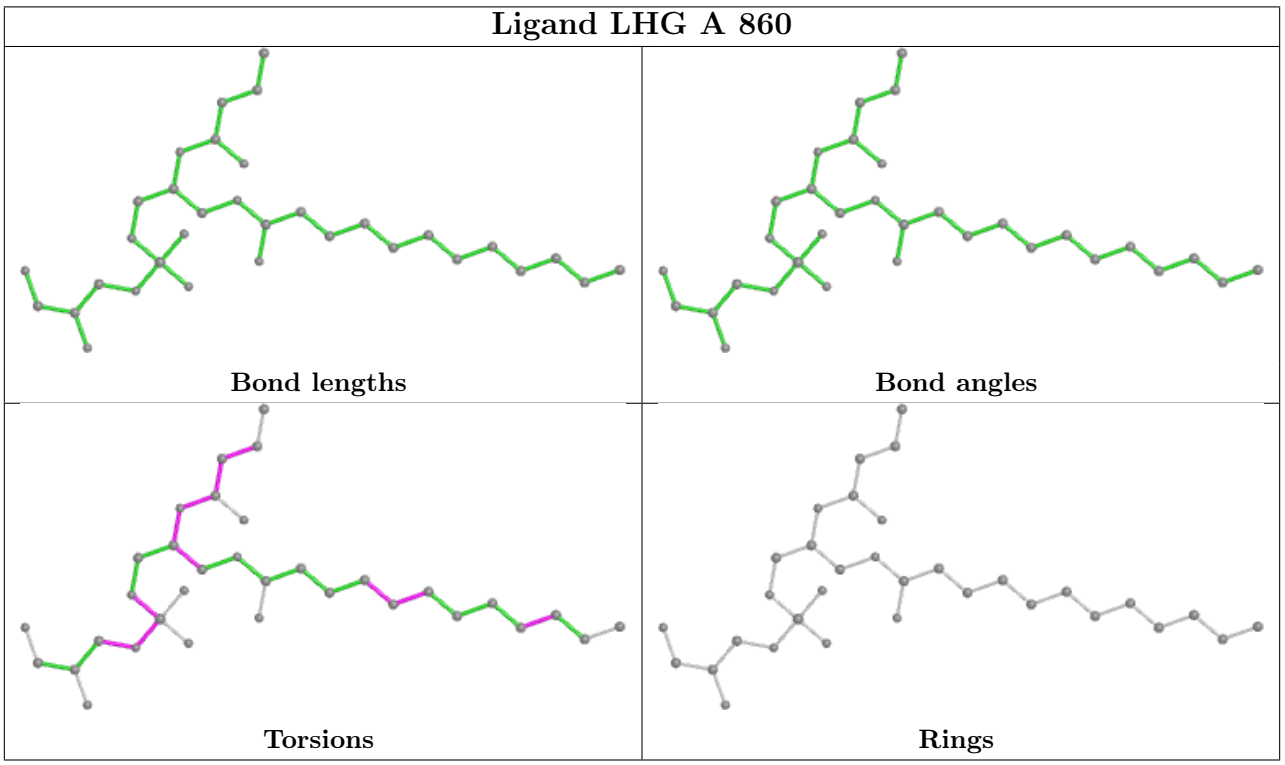
Ligand BCR A 845



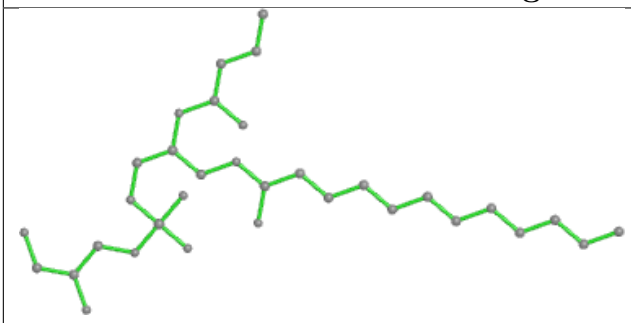
Ligand CLA A 834



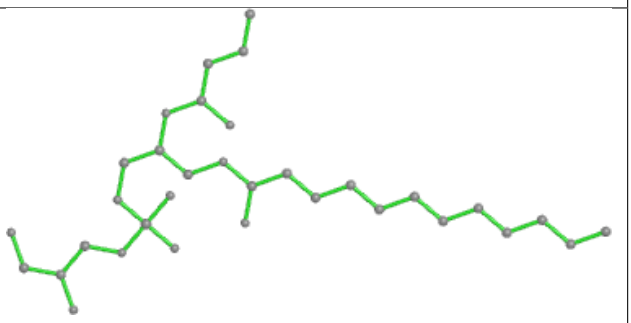
Ligand LHG A 860



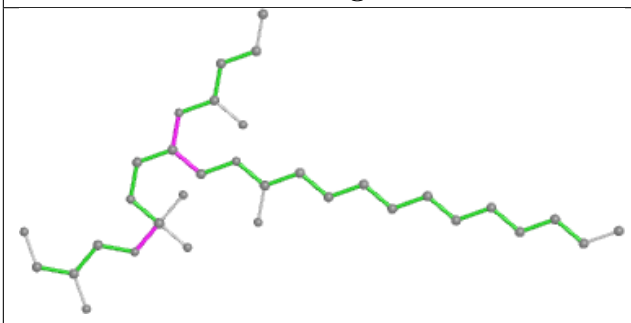
Ligand LHG B 846



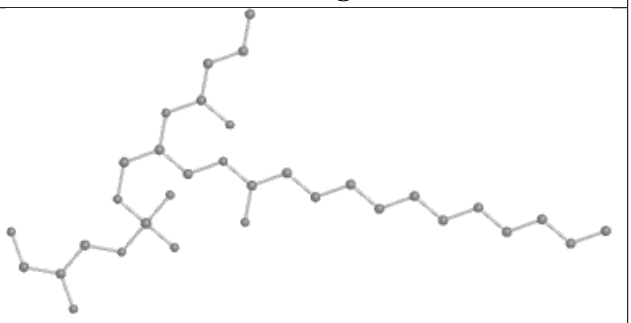
Bond lengths



Bond angles

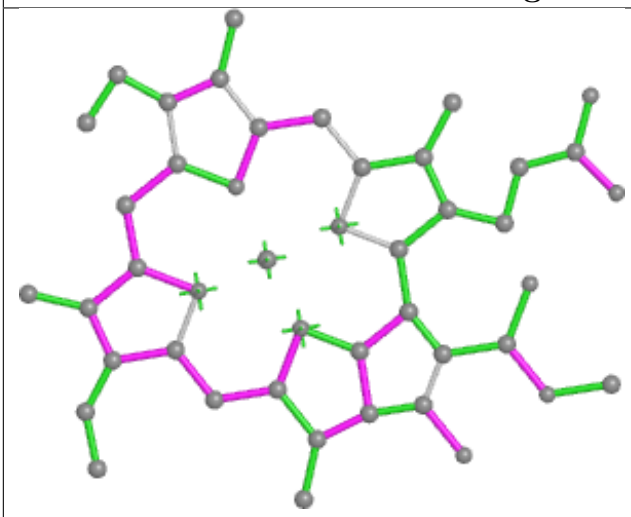


Torsions

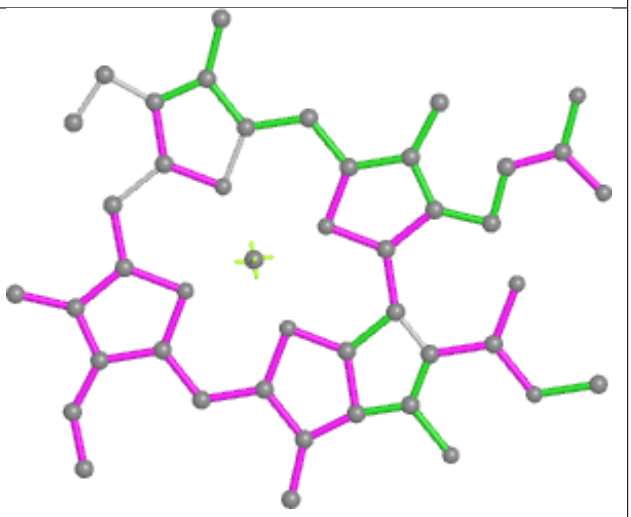


Rings

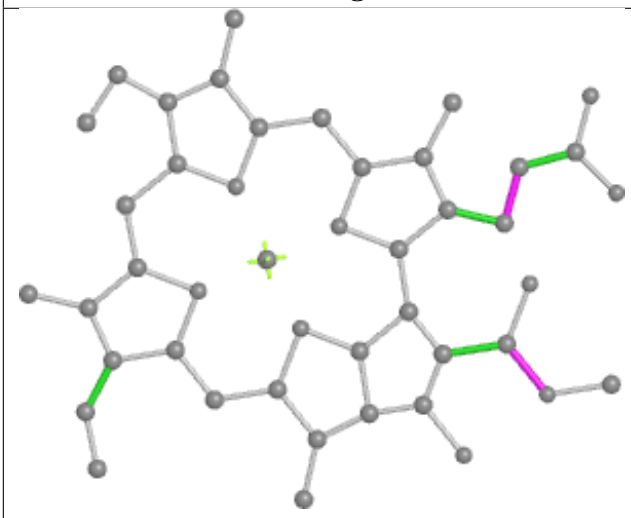
Ligand CLA A 814



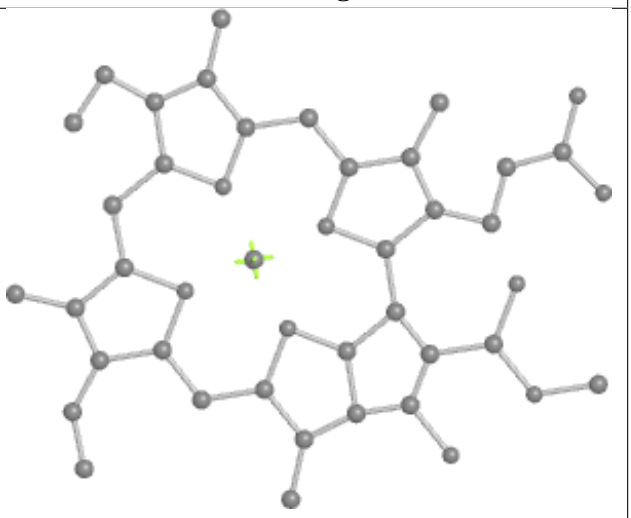
Bond lengths



Bond angles

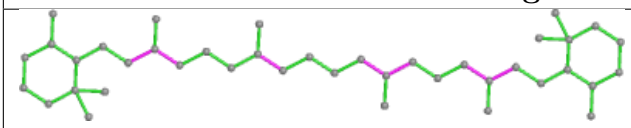


Torsions

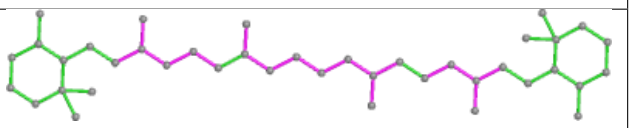


Rings

Ligand BCR B 844



Bond lengths



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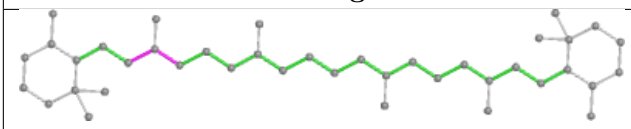
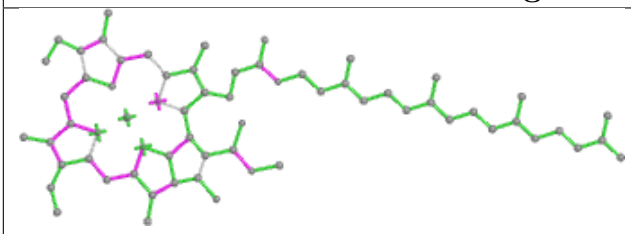


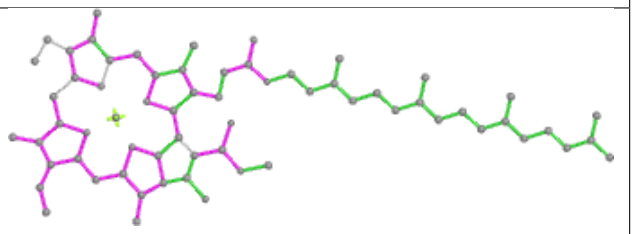
Torsions

Rings

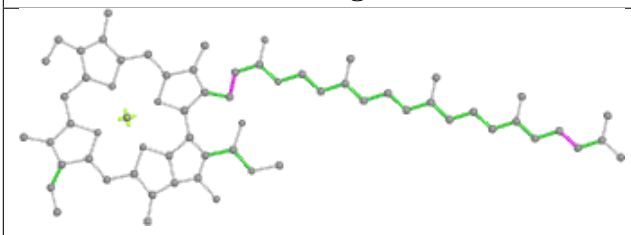
Ligand CLA A 857



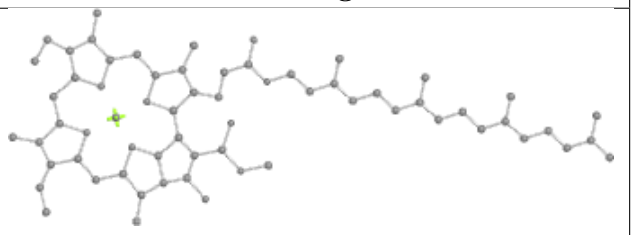
Bond lengths



Bond angles

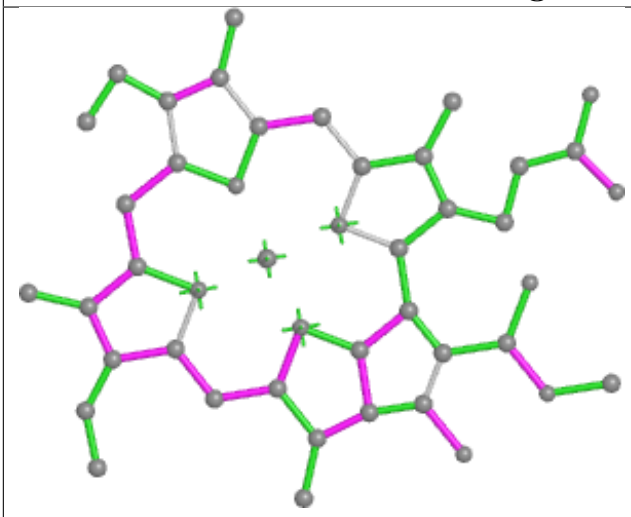


Torsions

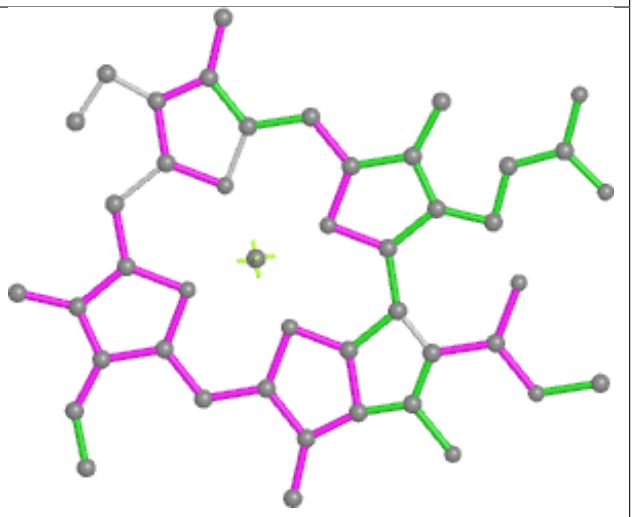


Rings

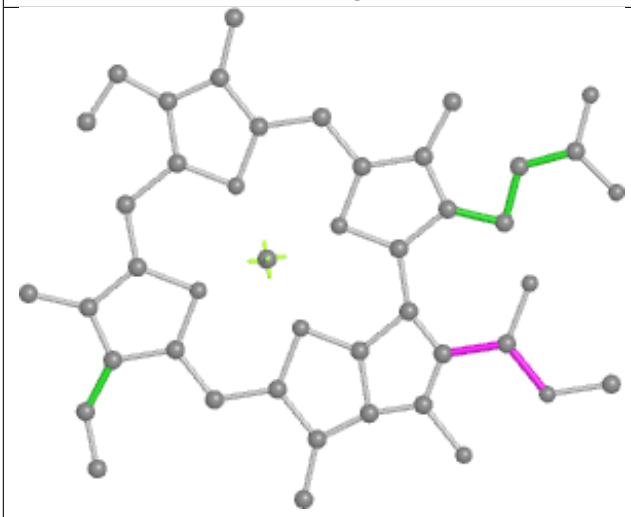
Ligand CLA 2 302



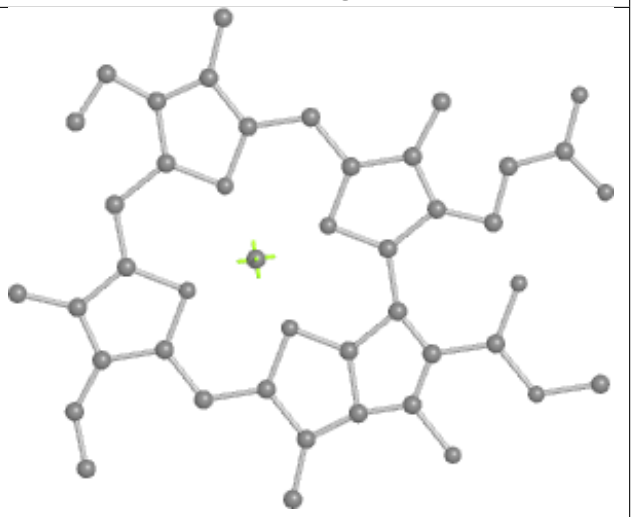
Bond lengths



Bond angles

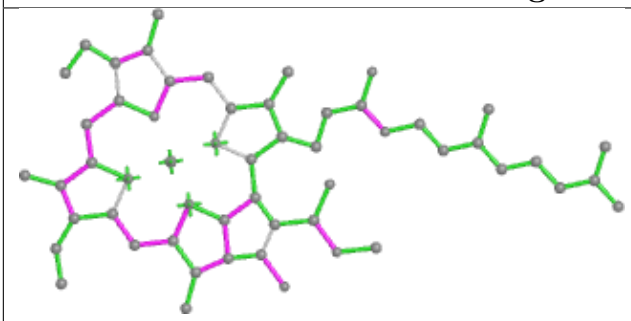


Torsions



Rings

Ligand CLA 4 308



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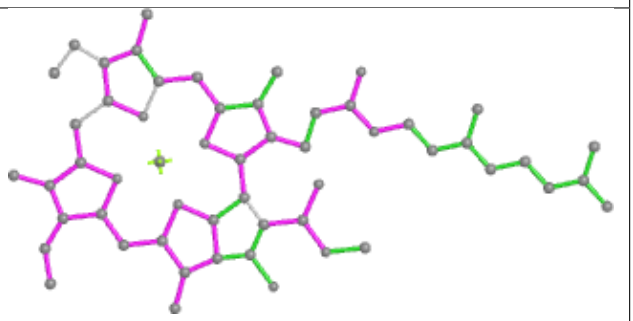
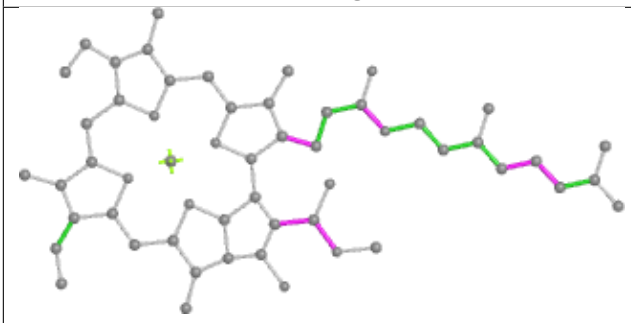
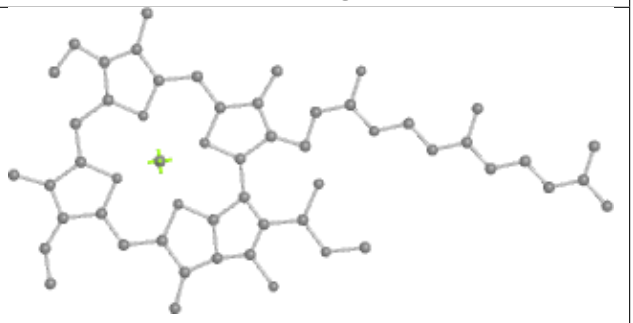


Bond angles

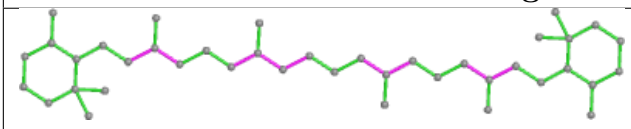


Torsions



Rings

Ligand BCR A 844



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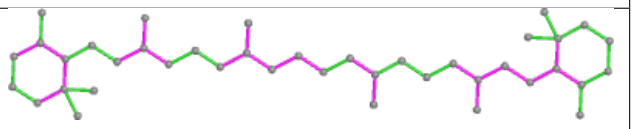
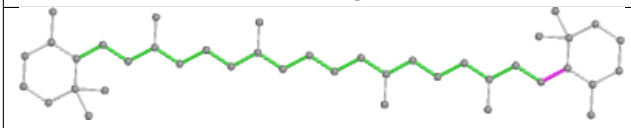


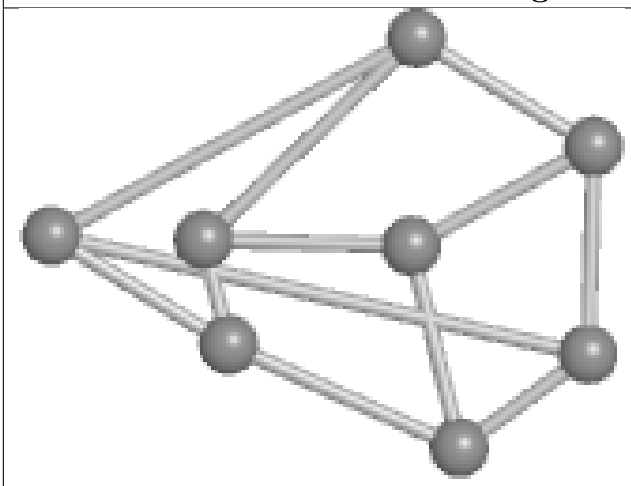
Bond angles



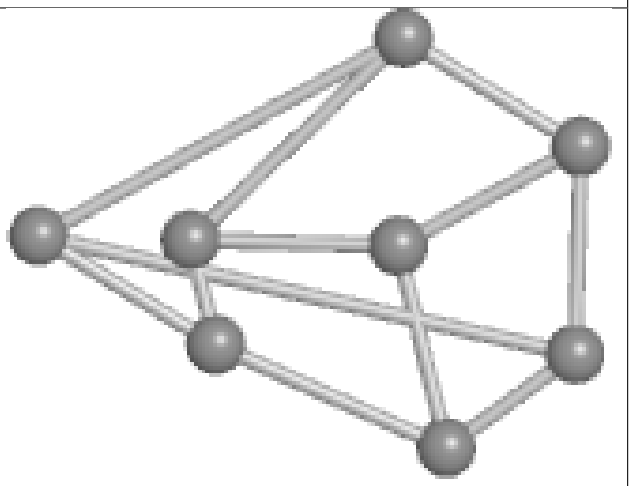
Torsions

Rings

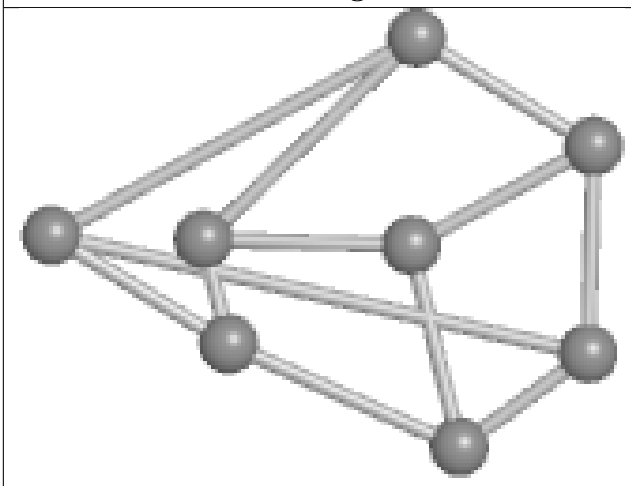
Ligand SF4 C 101



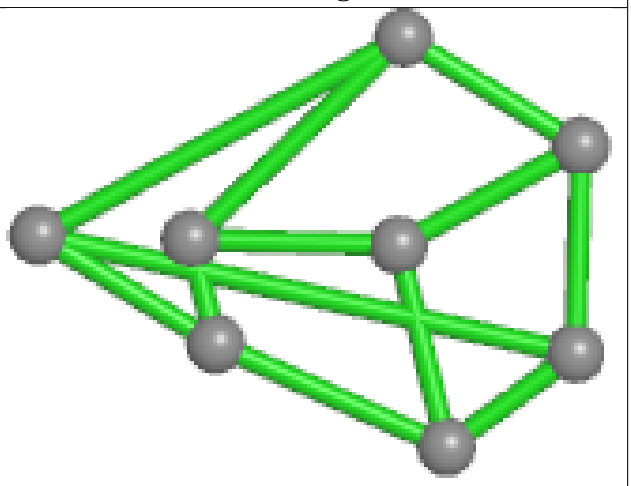
Bond lengths



Bond angles

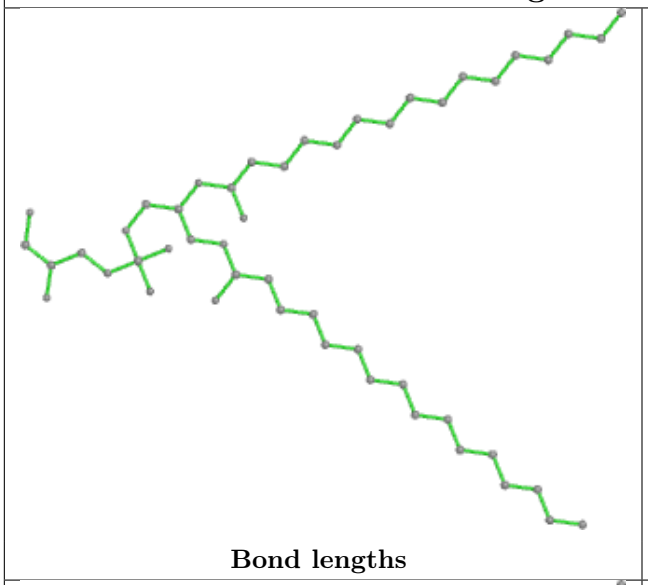


Torsions

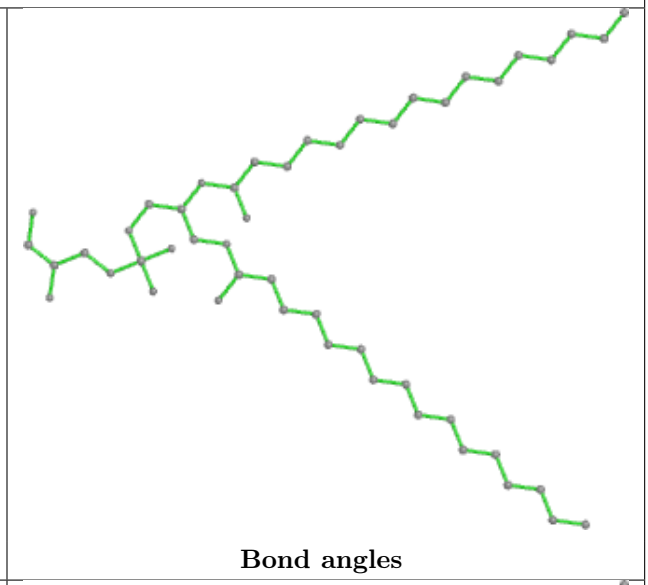


Rings

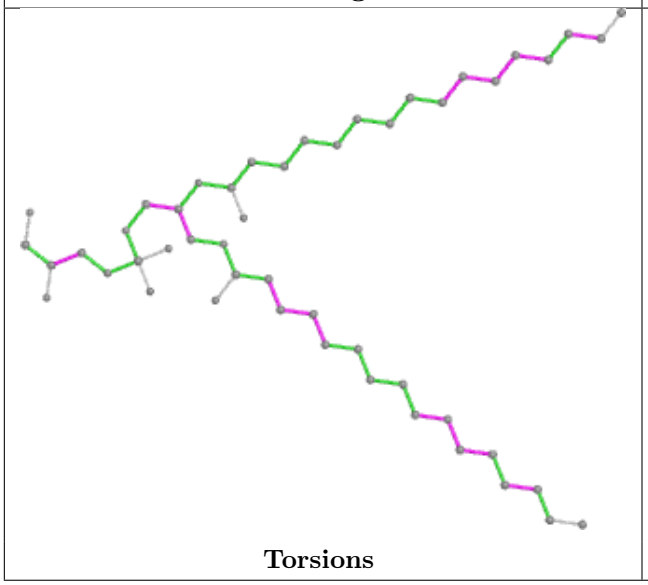
Ligand LHG 1 317



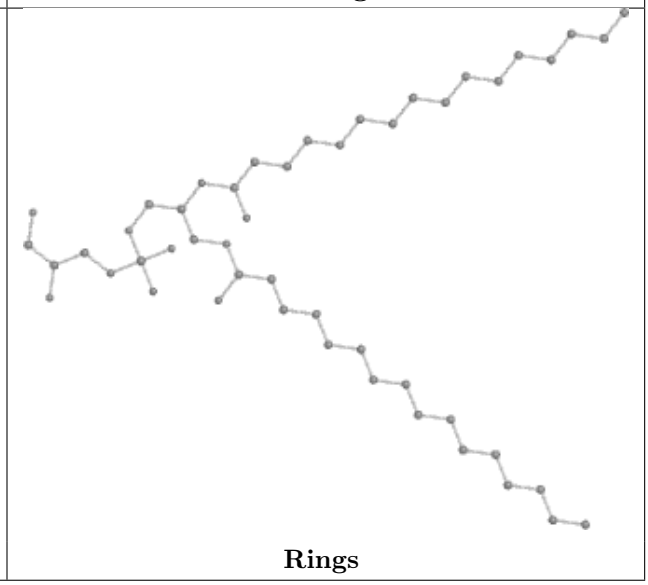
Bond lengths



Bond angles

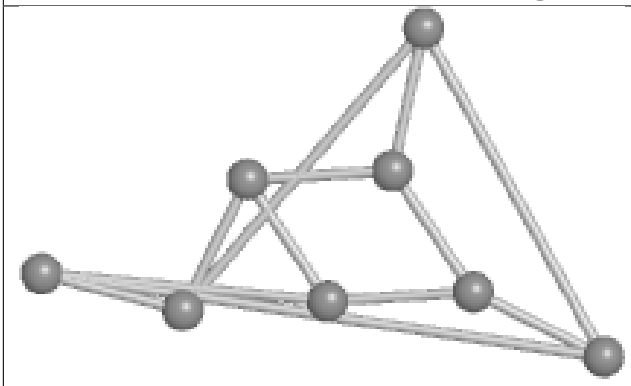


Torsions

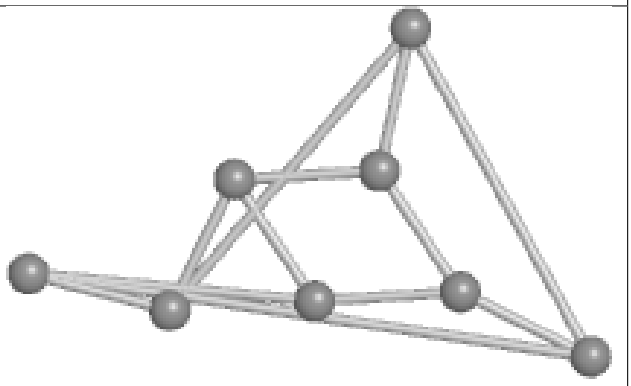


Rings

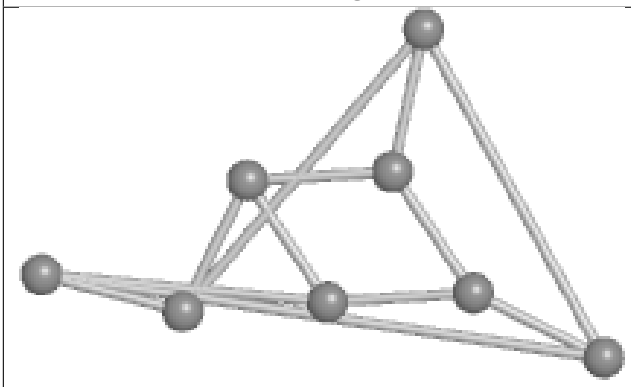
Ligand SF4 C 102



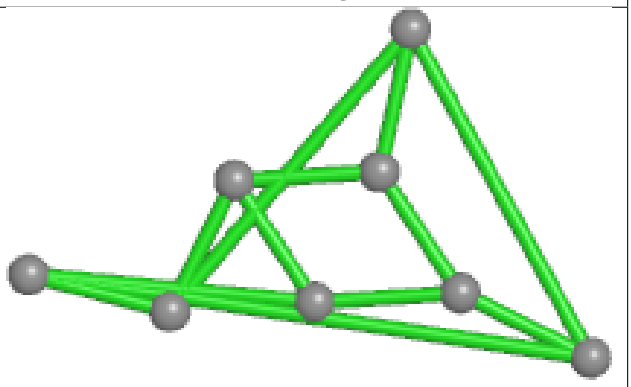
Bond lengths



Bond angles

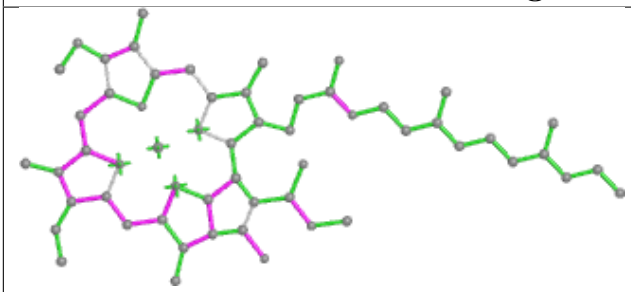


Torsions

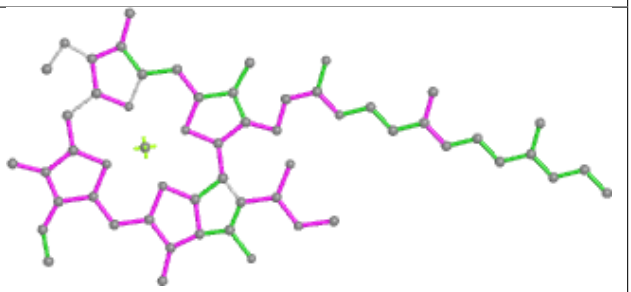


Rings

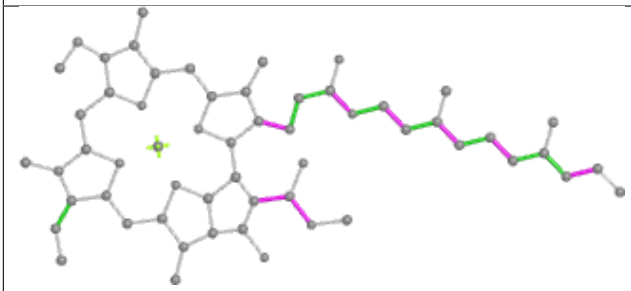
Ligand CLA L 203



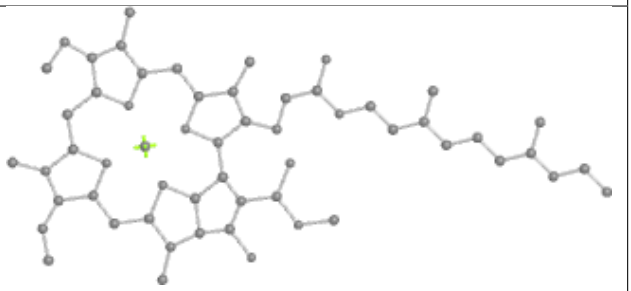
Bond lengths



Bond angles

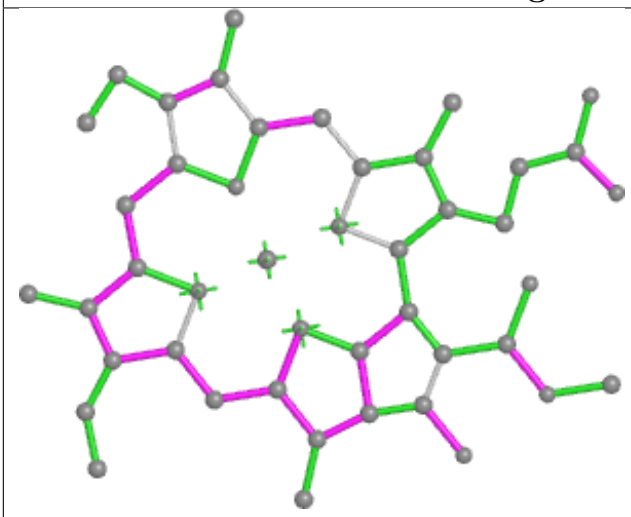


Torsions



Rings

Ligand CLA 7 307



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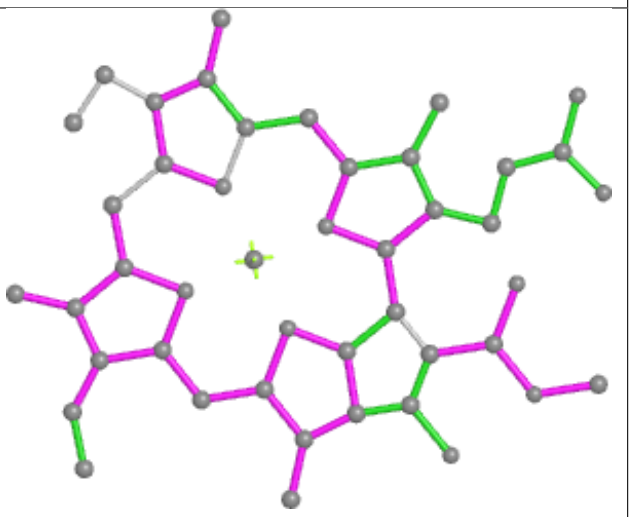
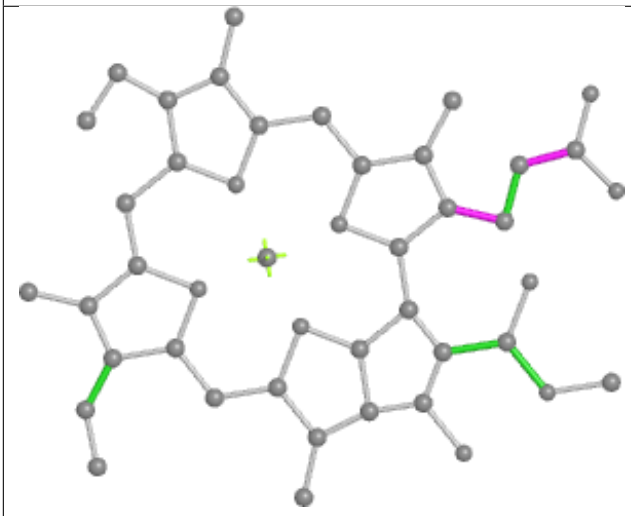
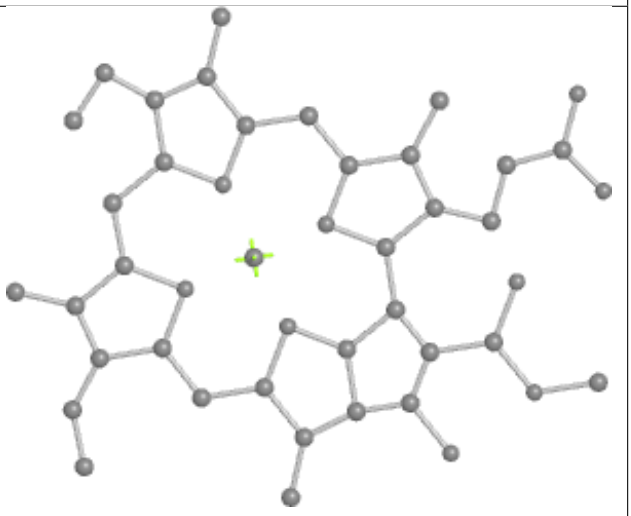


Bond angles

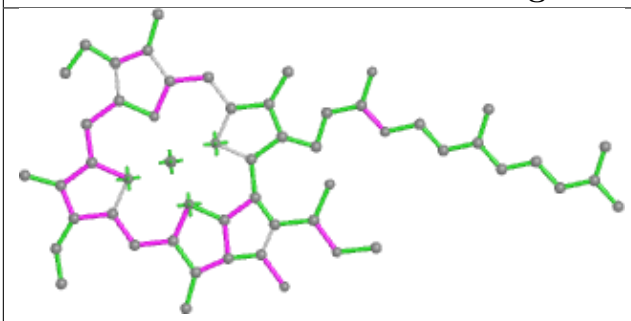


Torsions



Rings

Ligand CLA 5 307



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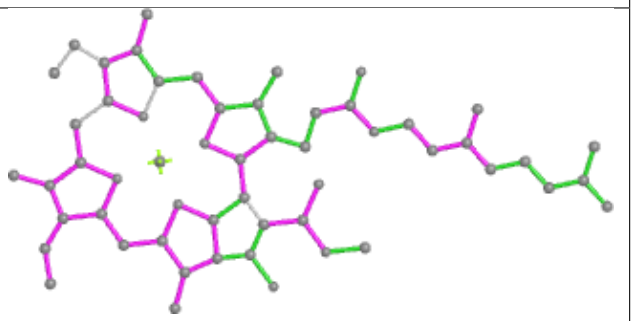
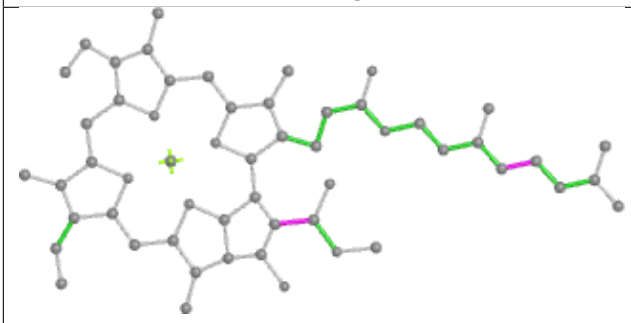


Bond angles



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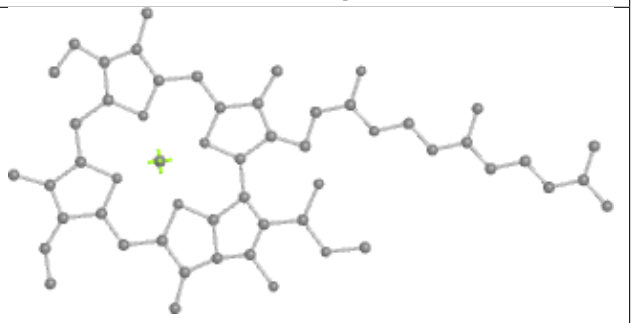
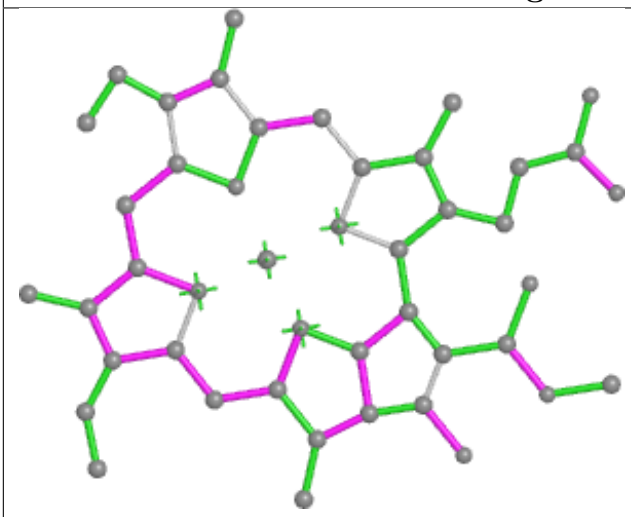


Rings

Ligand CLA L 205



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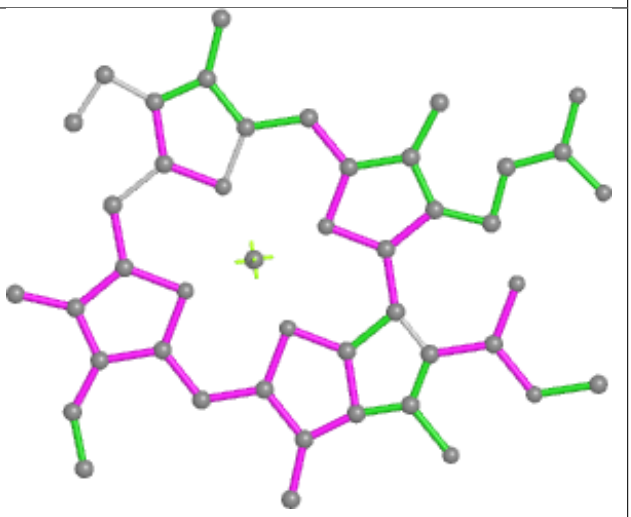
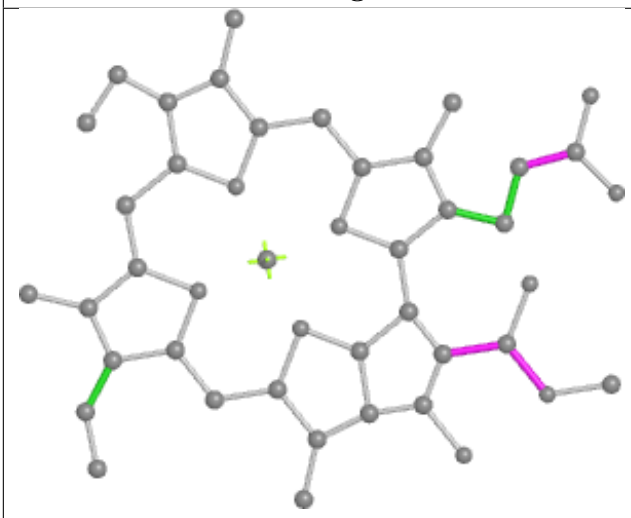
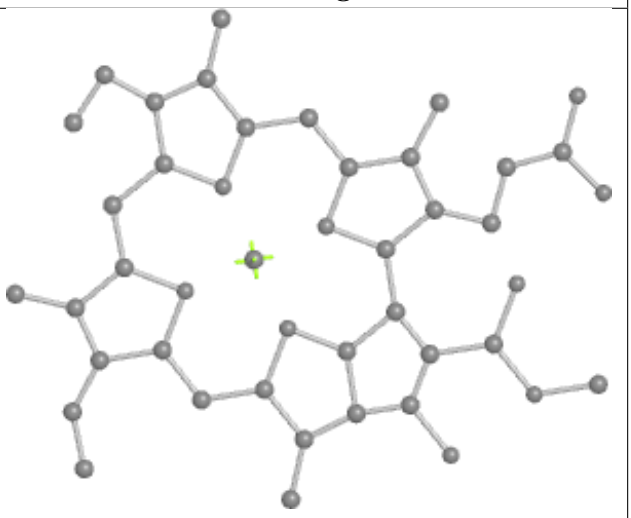


Bond angles

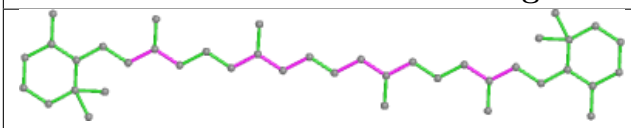


Torsions



Rings

Ligand BCR A 846



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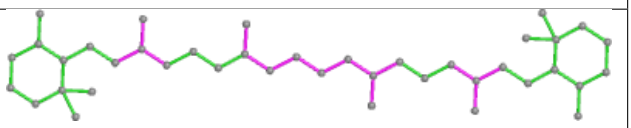
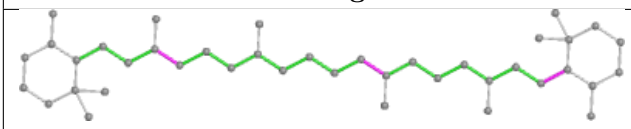


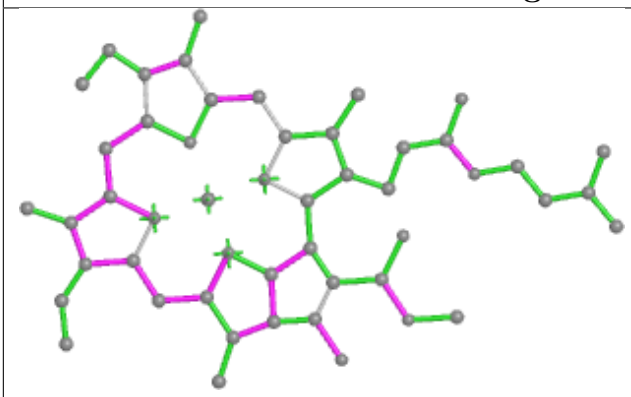
Bond angles



Torsions

Rings

Ligand CLA O 205



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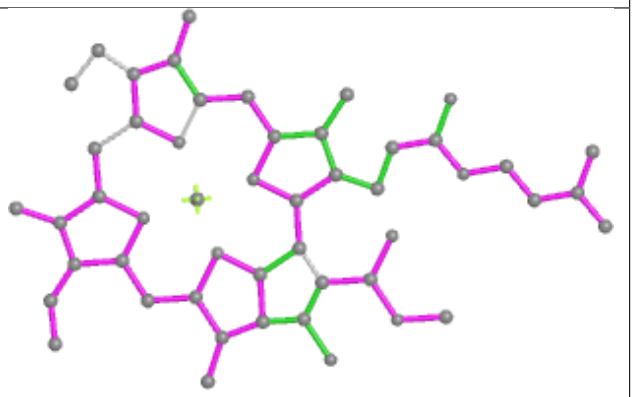
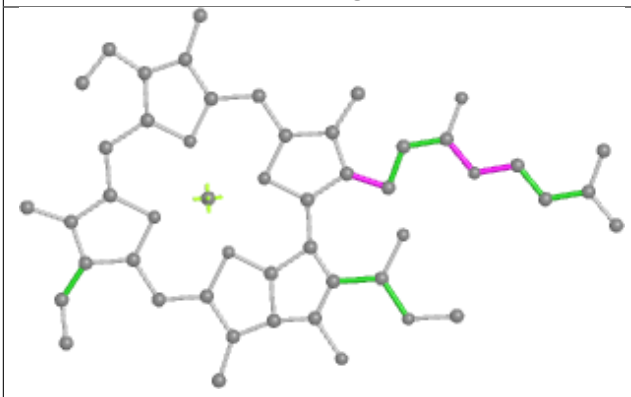
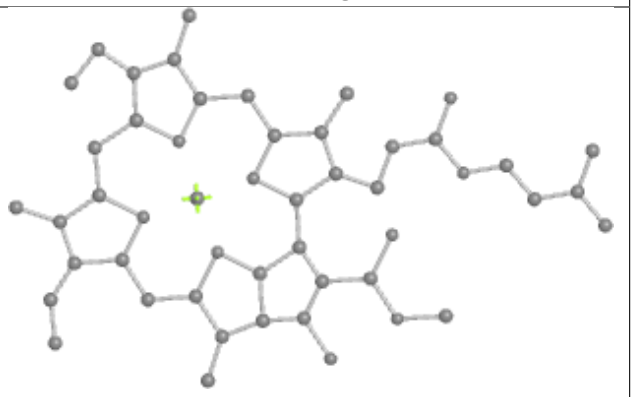


Bond angles

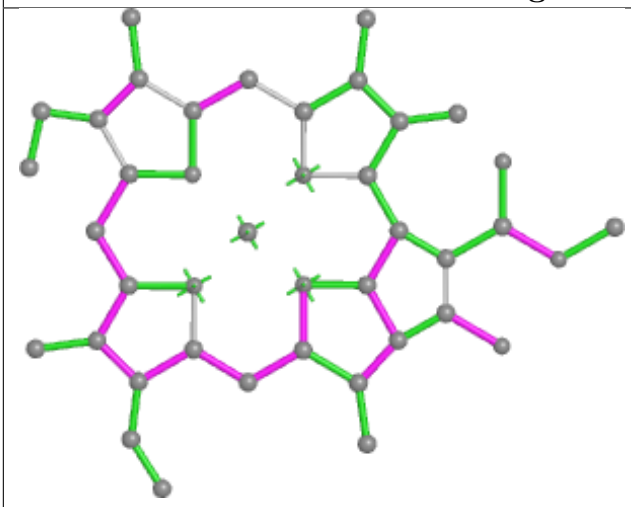


Torsions



Rings

Ligand CLA 2 309



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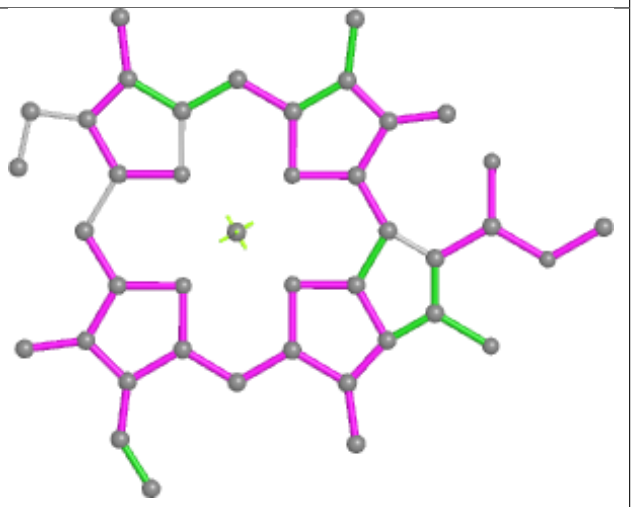
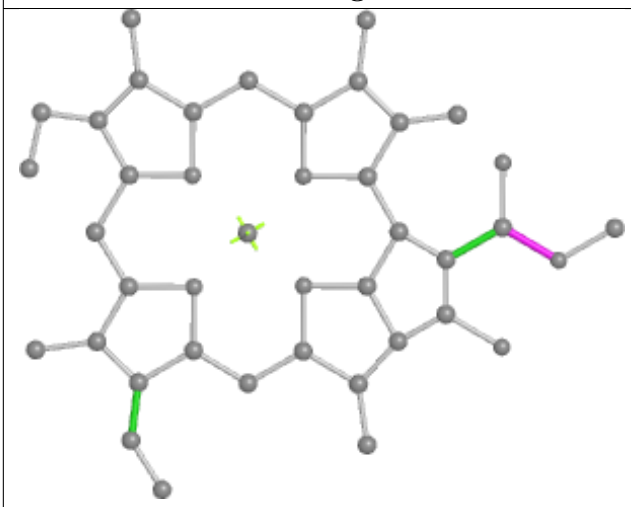
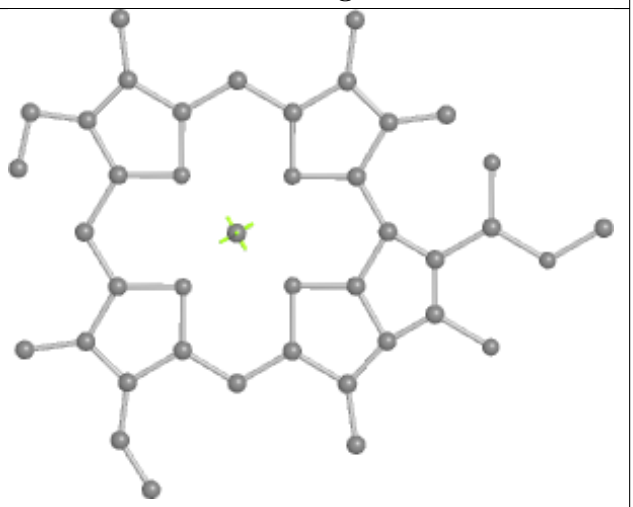


Bond angles

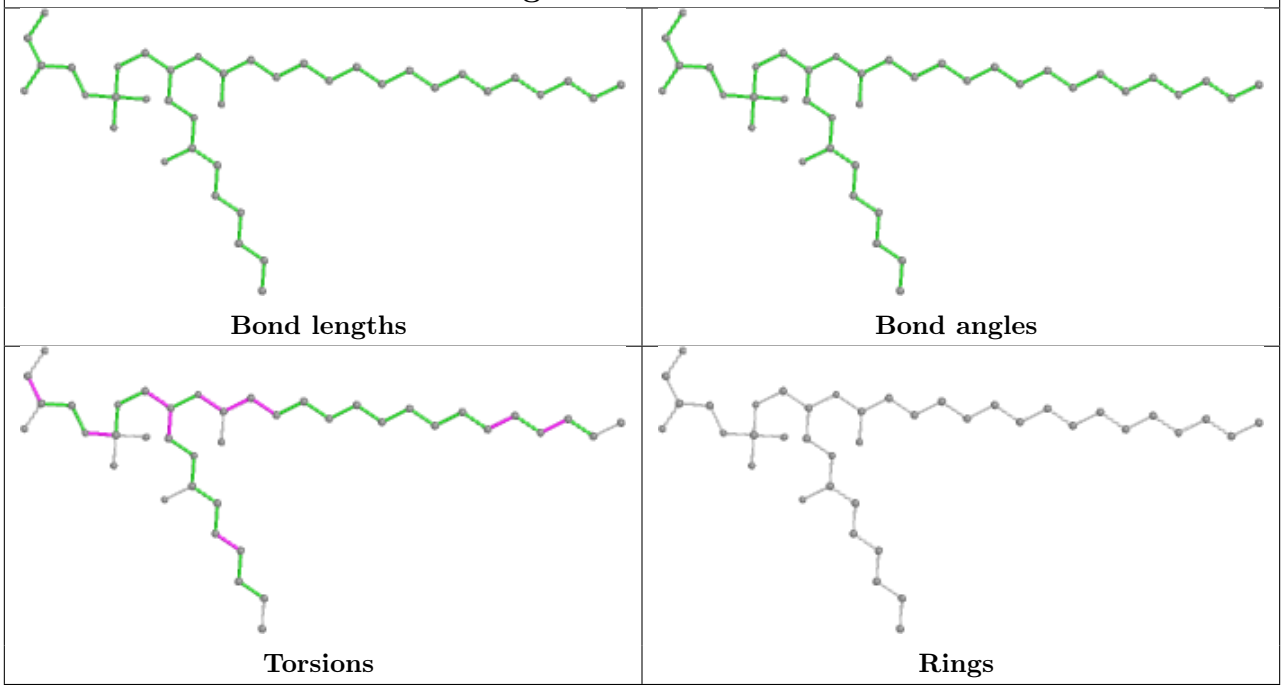


Torsions

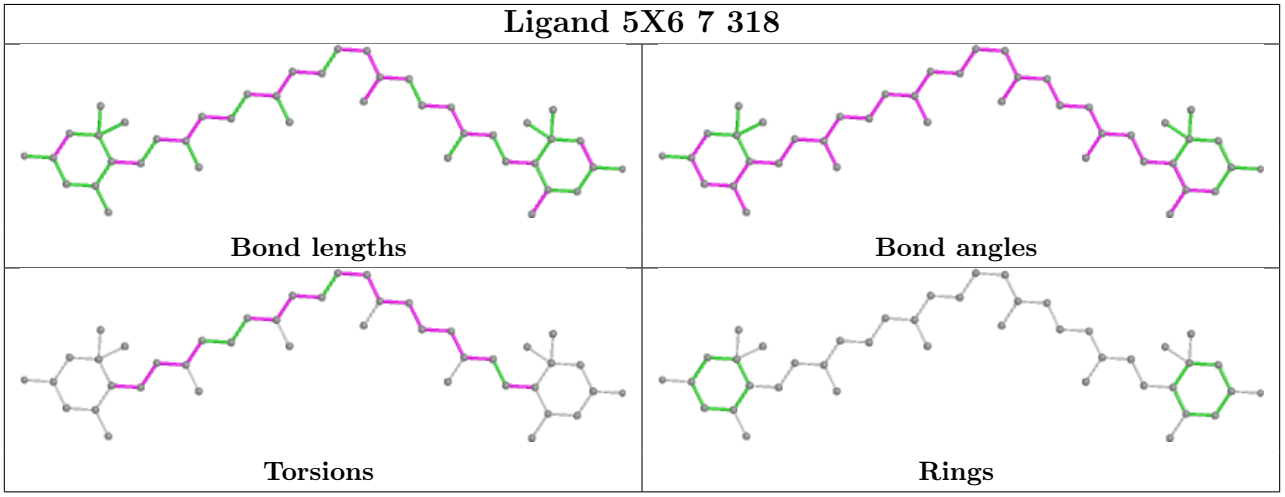


Rings

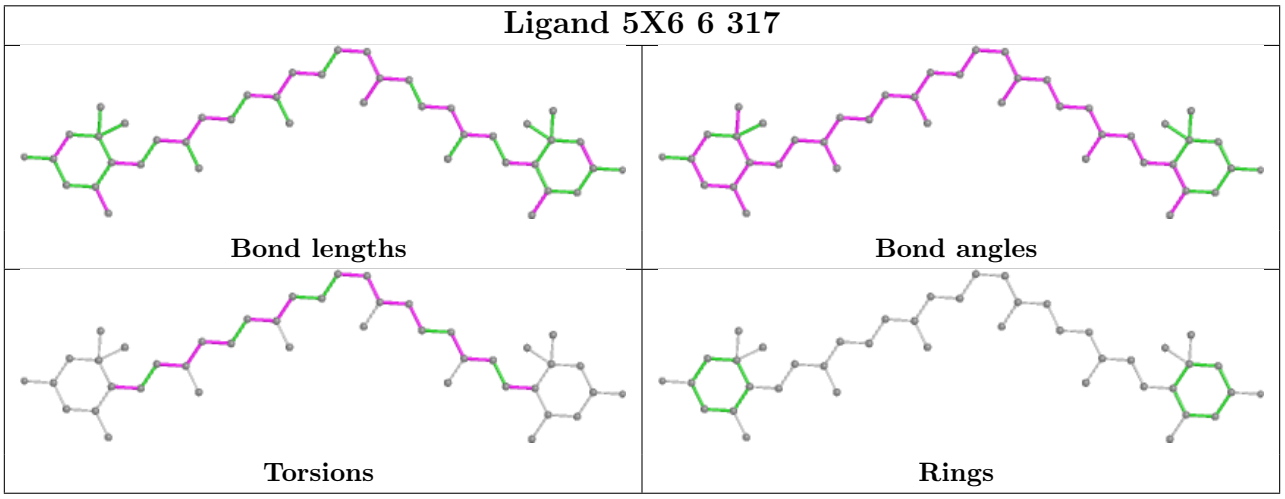
Ligand LHG A 842



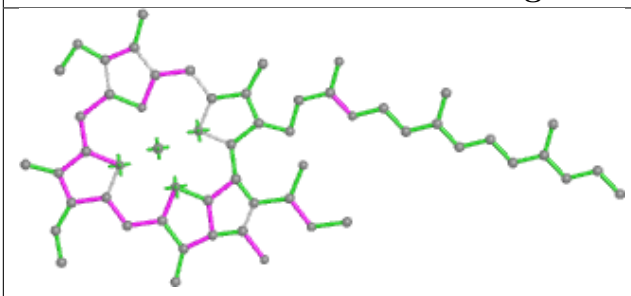
Ligand 5X6 7 318



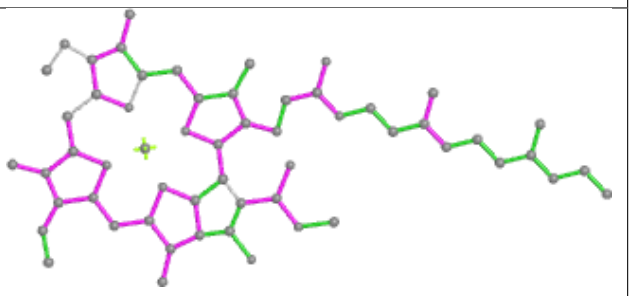
Ligand 5X6 6 317



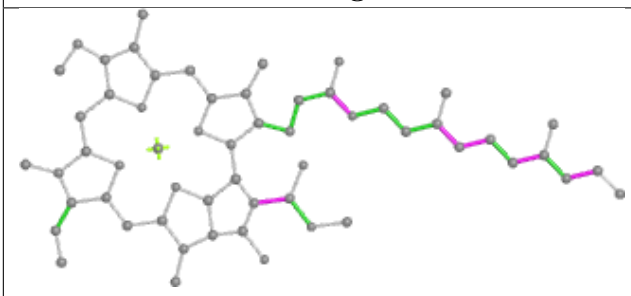
Ligand CLA B 814



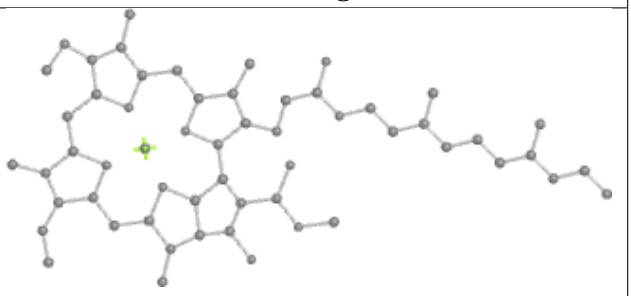
Bond lengths



Bond angles

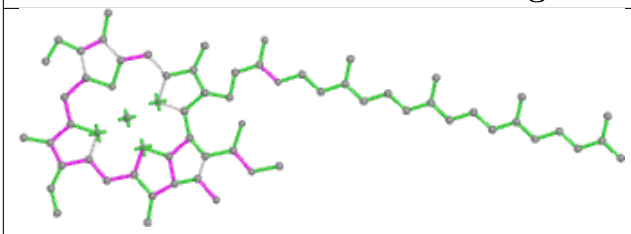


Torsions

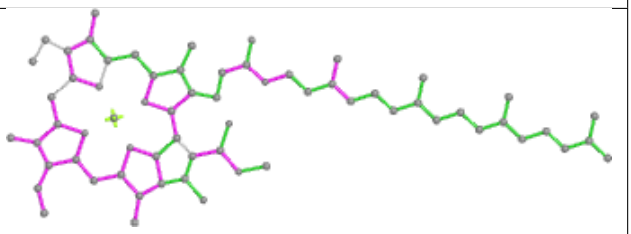


Rings

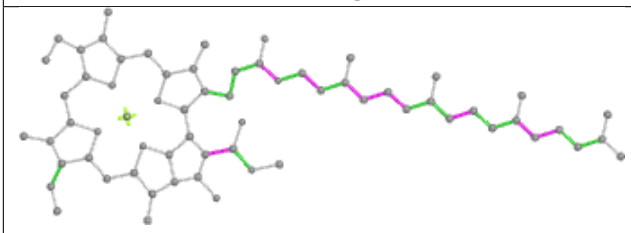
Ligand CLA 4 309



Bond lengths



Bond angles



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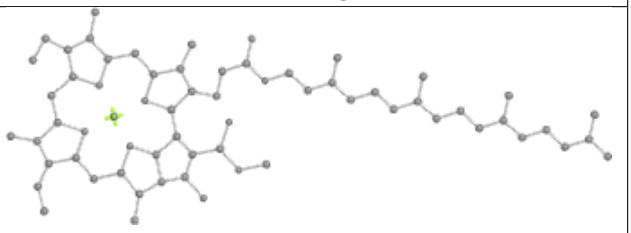
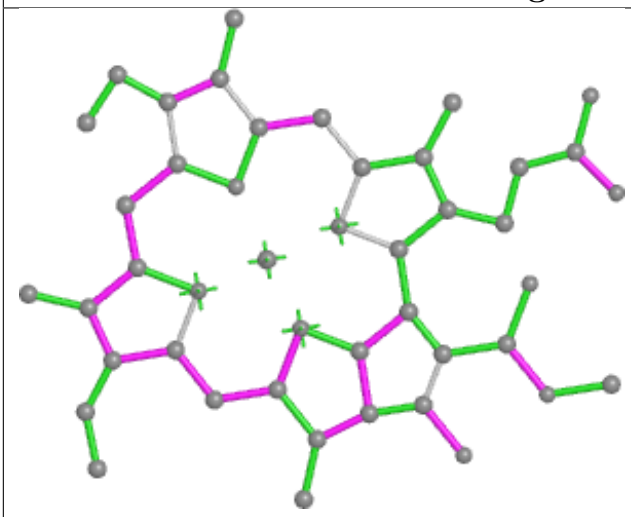
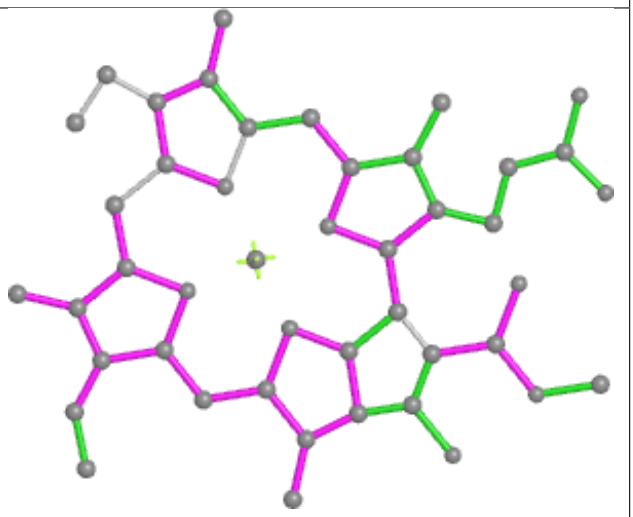


Rings

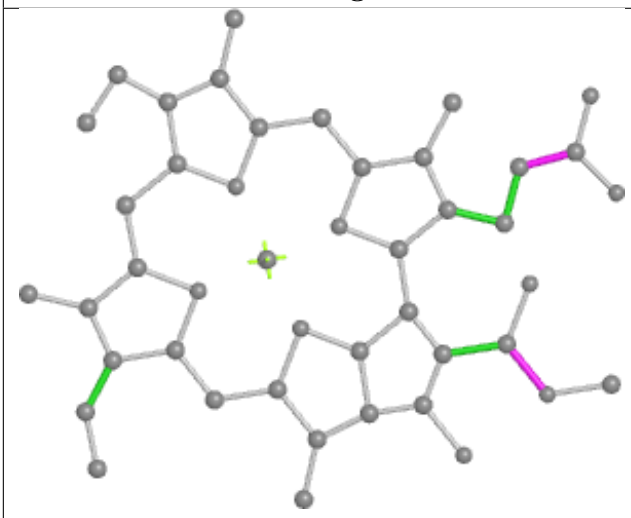
Ligand CLA 3 302



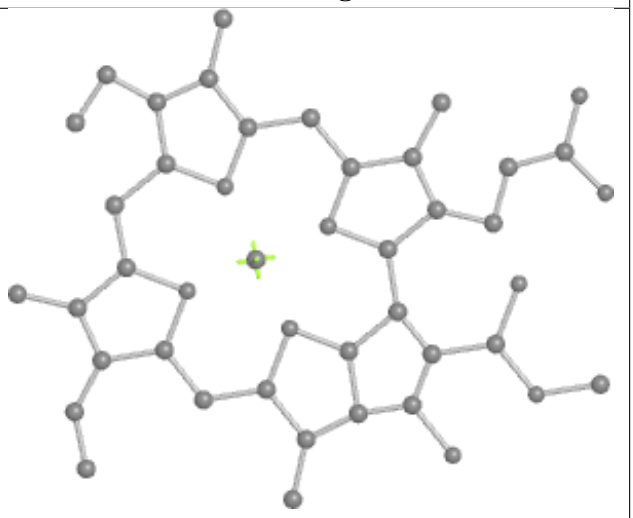
Bond lengths



Bond angles

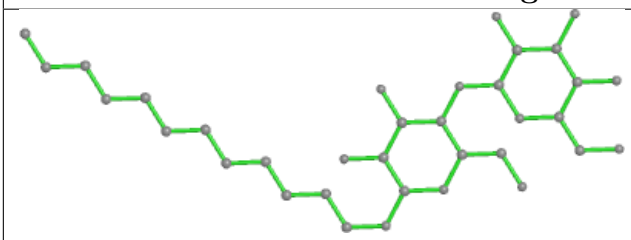


Torsions

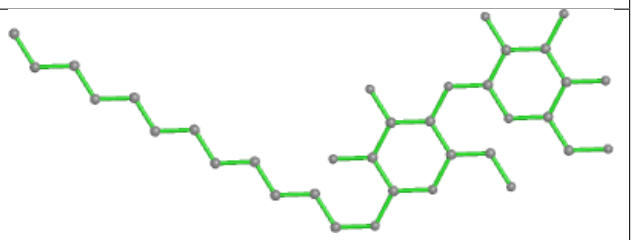


Rings

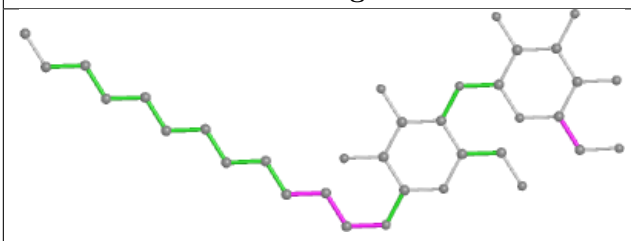
Ligand LMT O 201



Bond lengths



Bond angles



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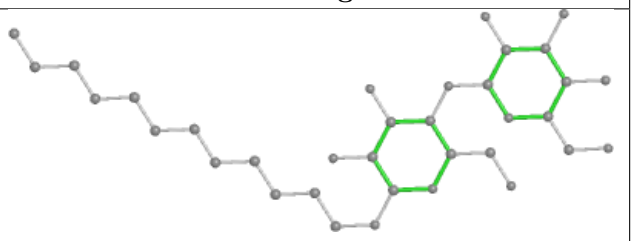
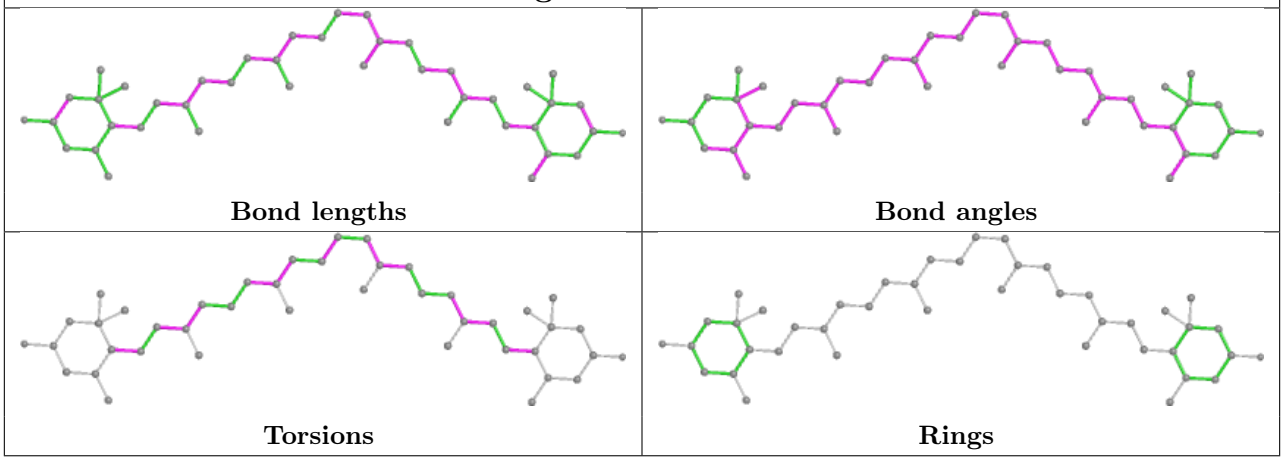
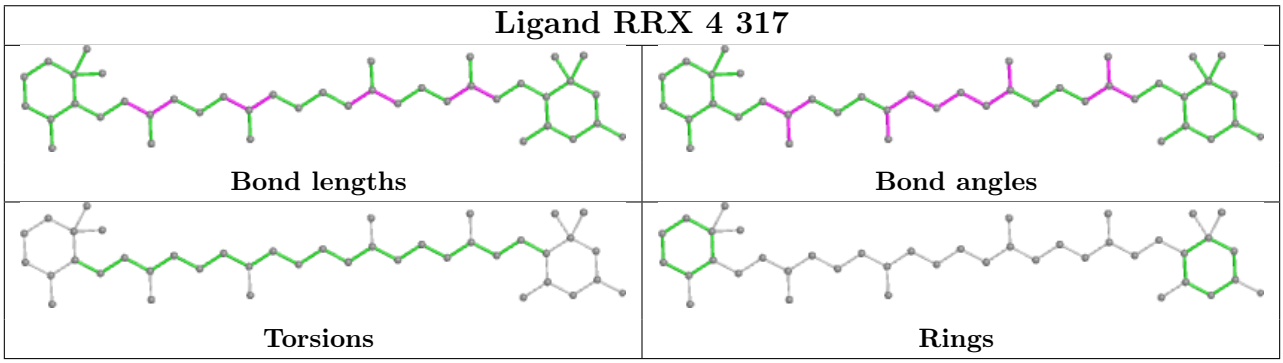


Rings

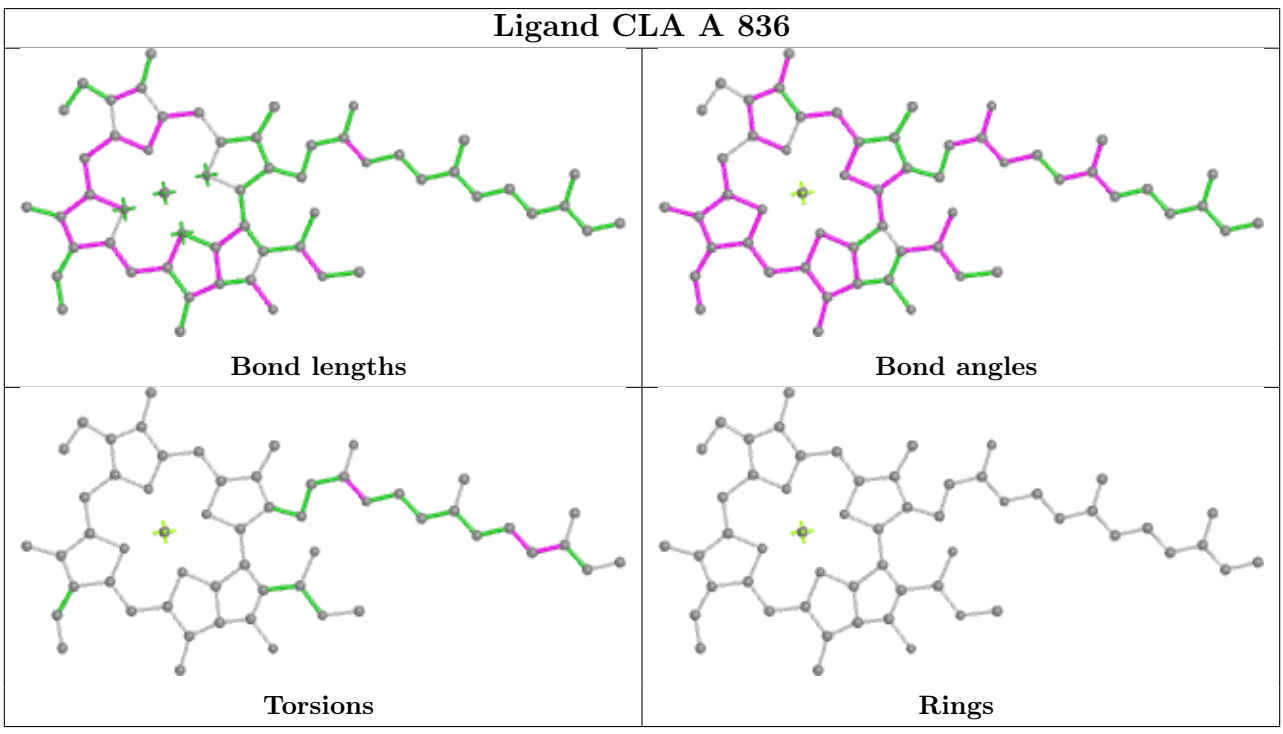
Ligand 5X6 1 312



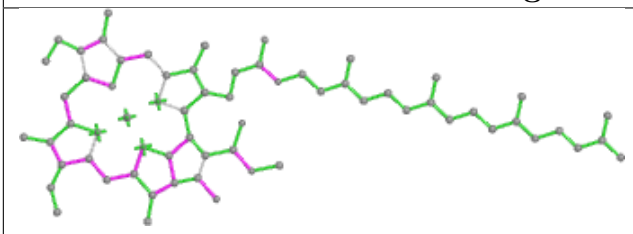
Ligand RRX 4 317



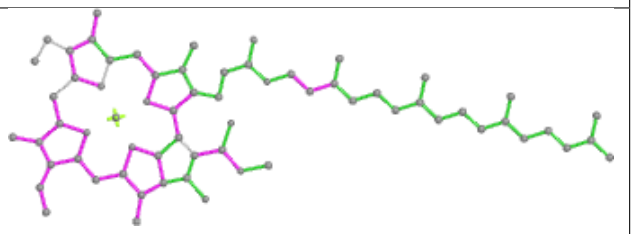
Ligand CLA A 836



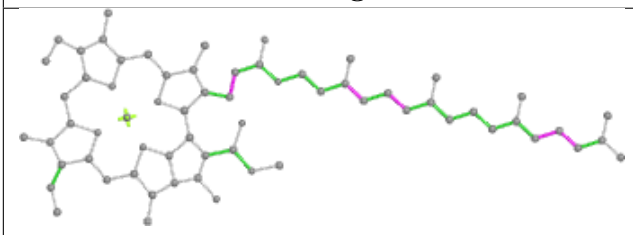
Ligand CLA A 827



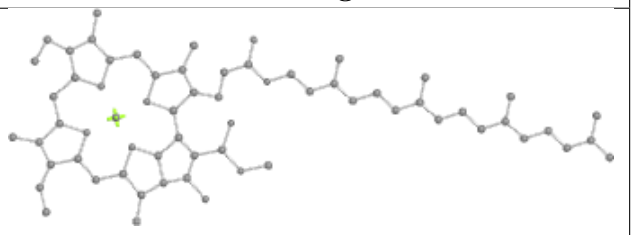
Bond lengths



Bond angles

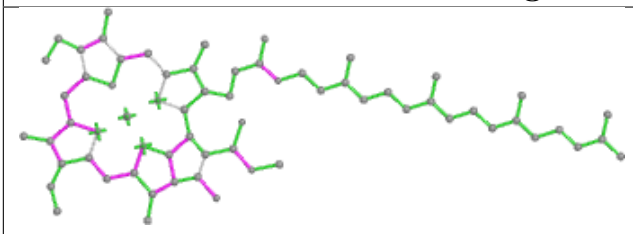


Torsions

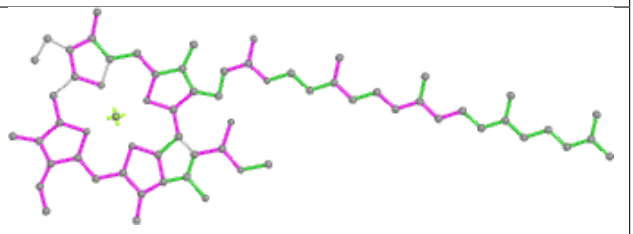


Rings

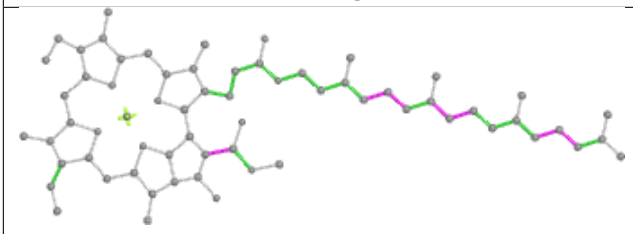
Ligand CLA A 858



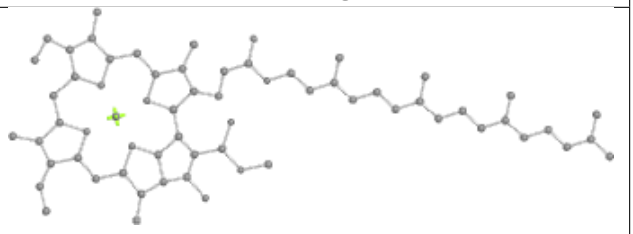
Bond lengths



Bond angles

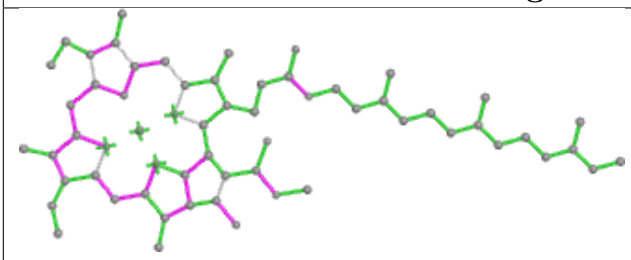


Torsions

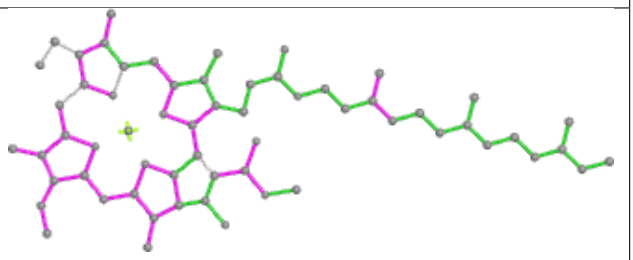


Rings

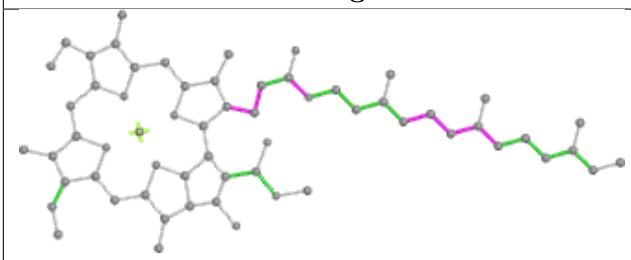
Ligand CLA L 204



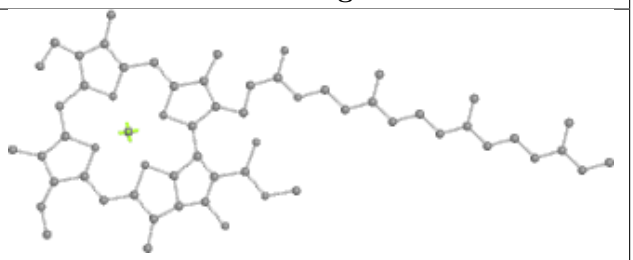
Bond lengths



Bond angles

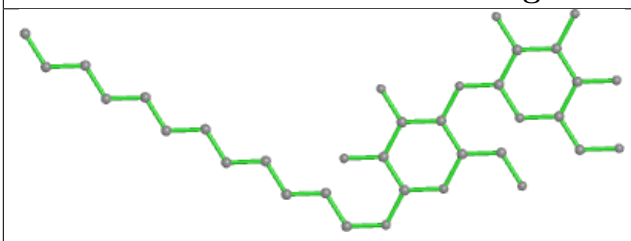


Torsions

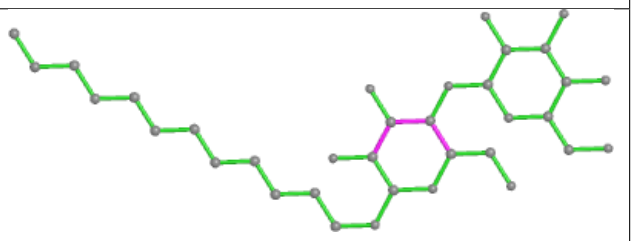


Rings

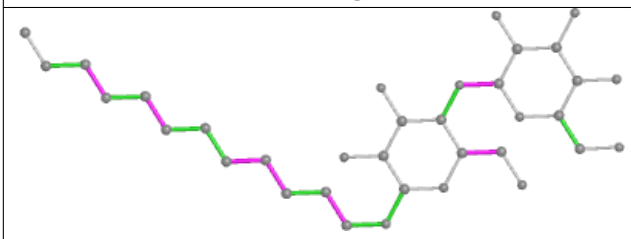
Ligand LMT F 202



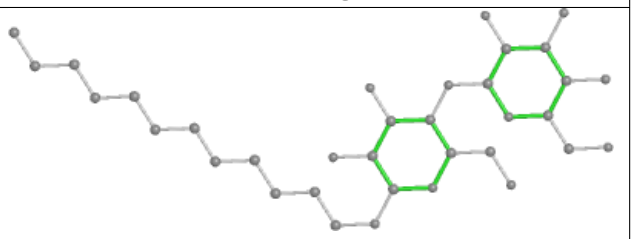
Bond lengths



Bond angles

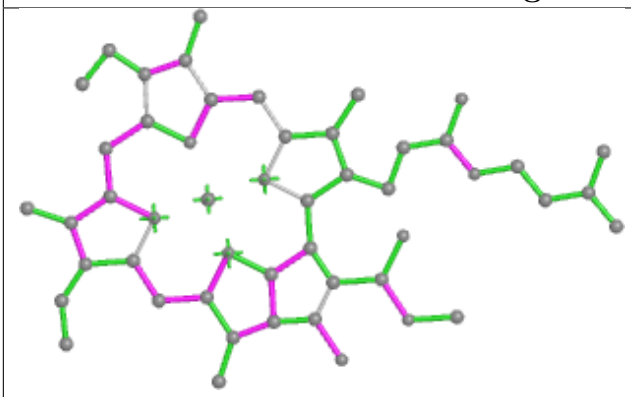


Torsions

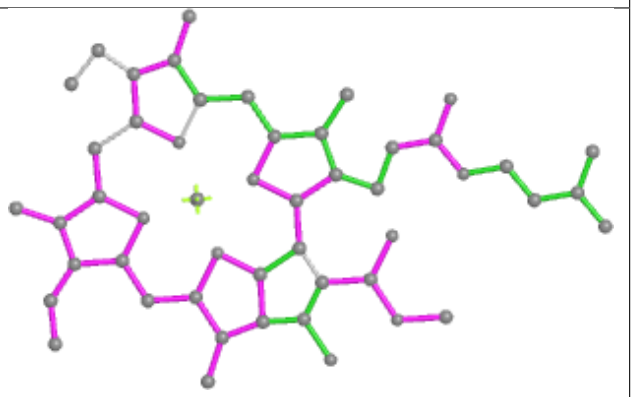


Rings

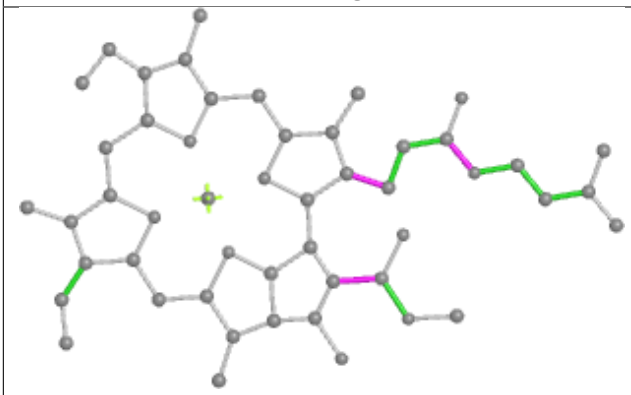
Ligand CLA A 805



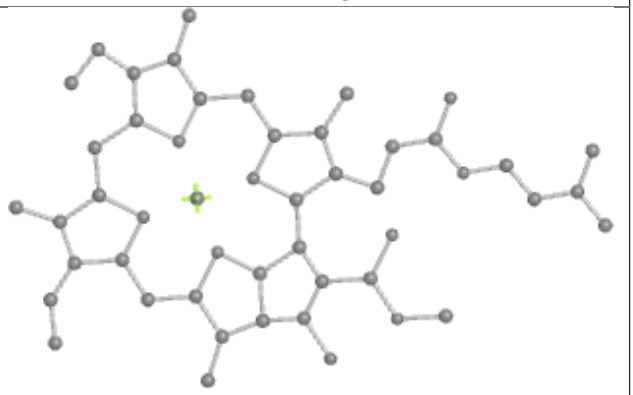
Bond lengths



Bond angles

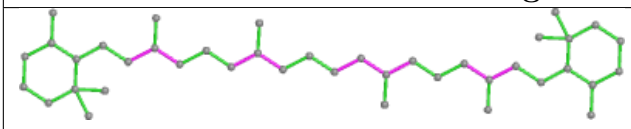


Torsions

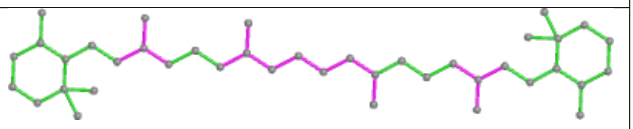


Rings

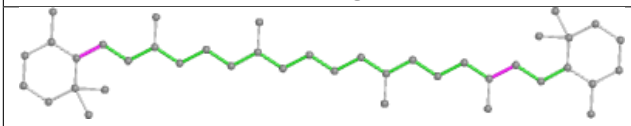
Ligand BCR B 843



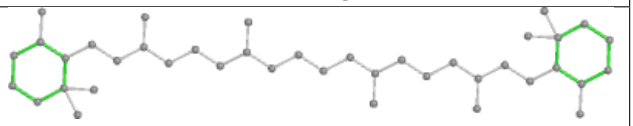
Bond lengths



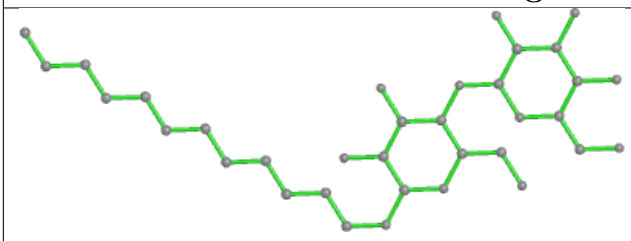
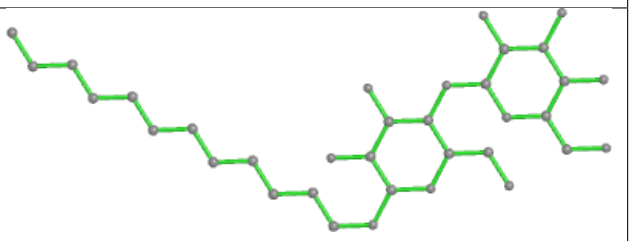
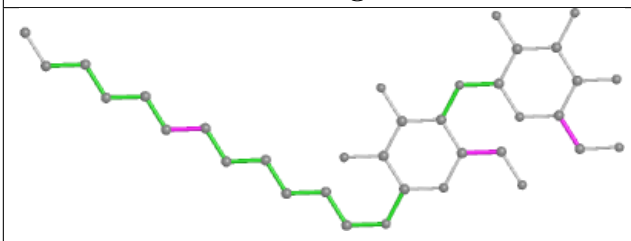
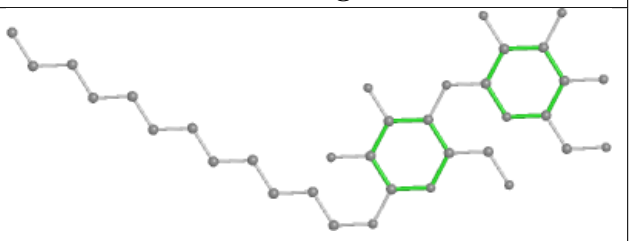
Bond angles

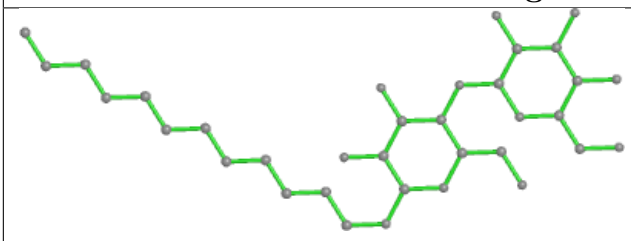
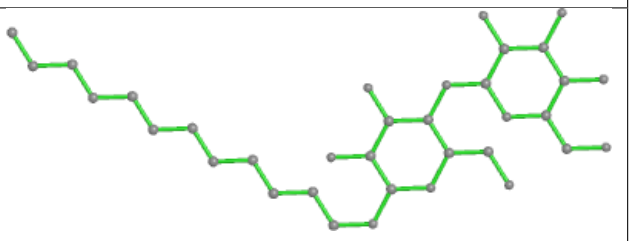
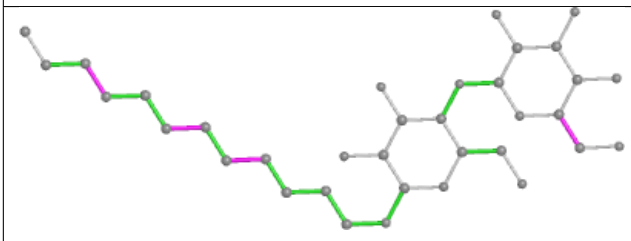
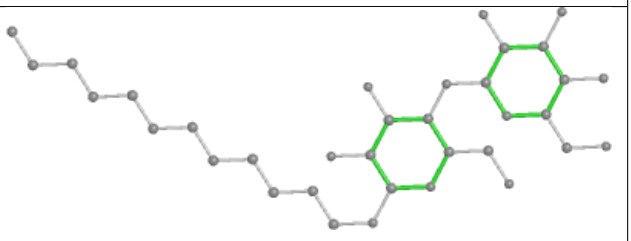


Torsions

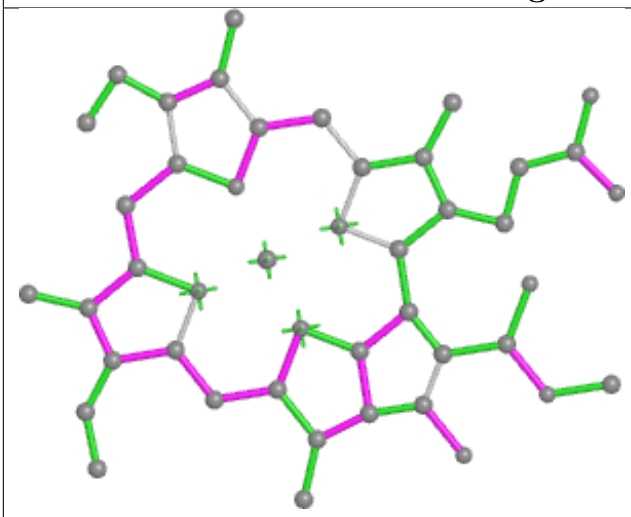


Rings

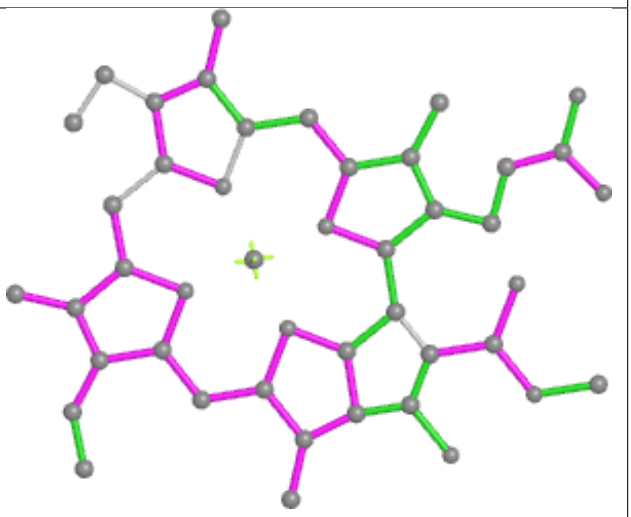
Ligand LMT 4 319	
 Bond lengths	 Bond angles
 Torsions	 Rings

Ligand LMT 5 320	
 Bond lengths	 Bond angles
 Torsions	 Rings

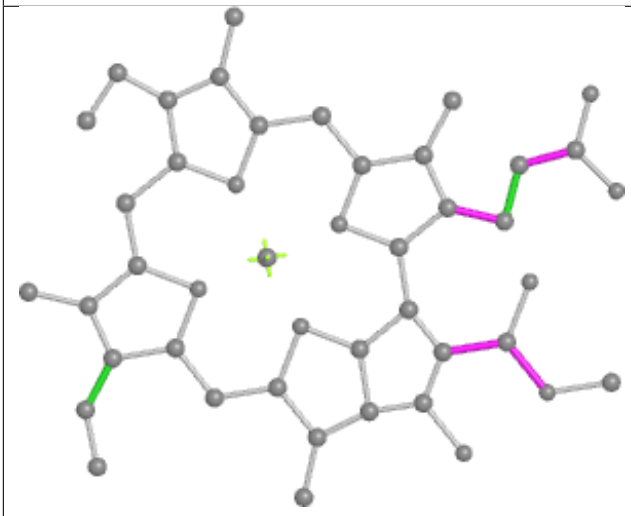
Ligand CLA 6 313



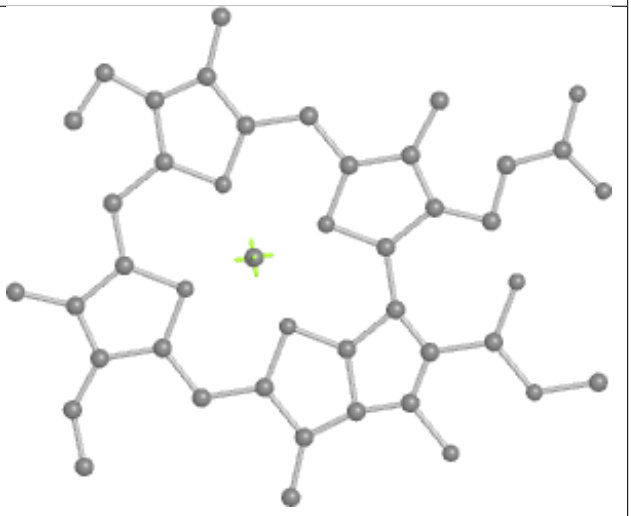
Bond lengths



Bond angles

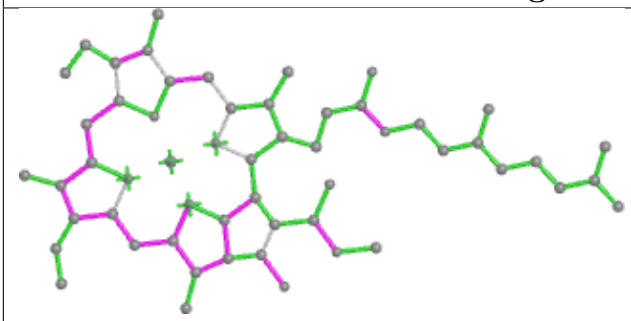


Torsions

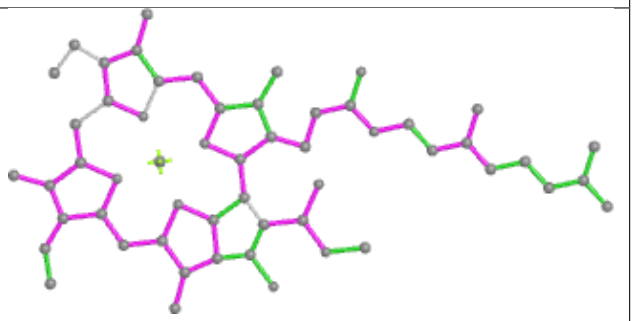


Rings

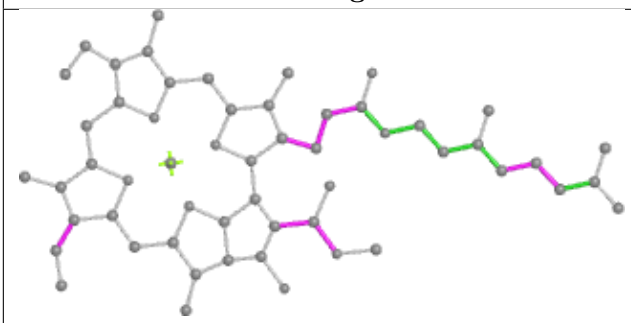
Ligand CLA 2 305



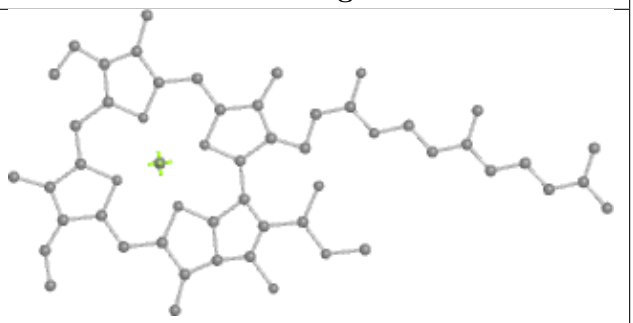
Bond lengths



Bond angles

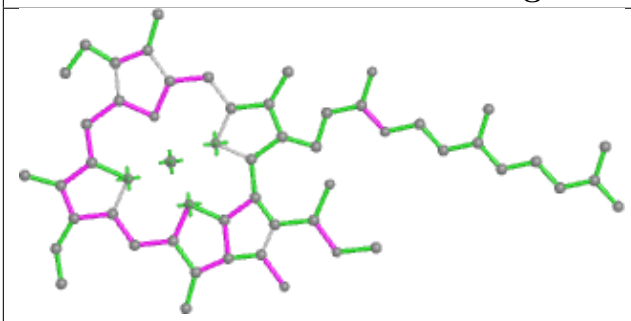


Torsions

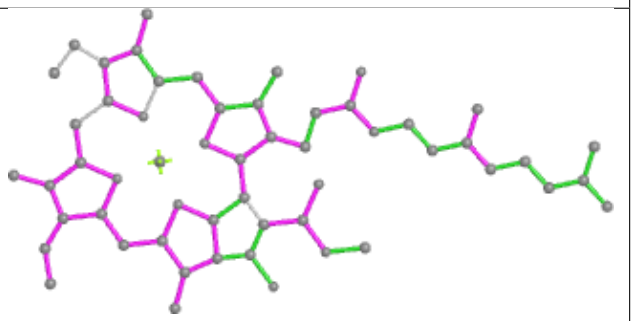


Rings

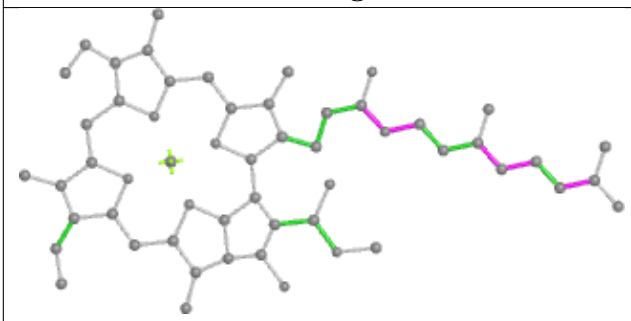
Ligand CLA A 802



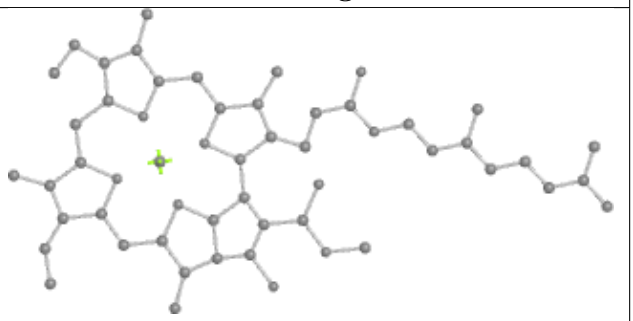
Bond lengths



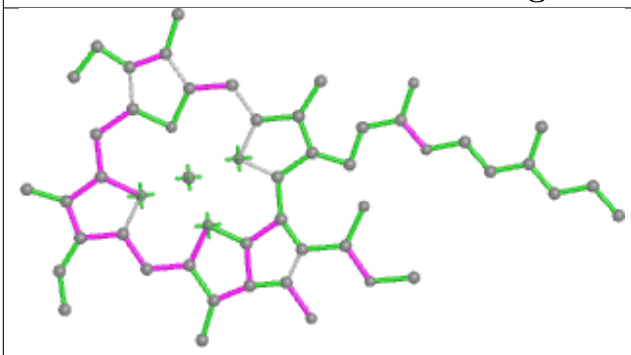
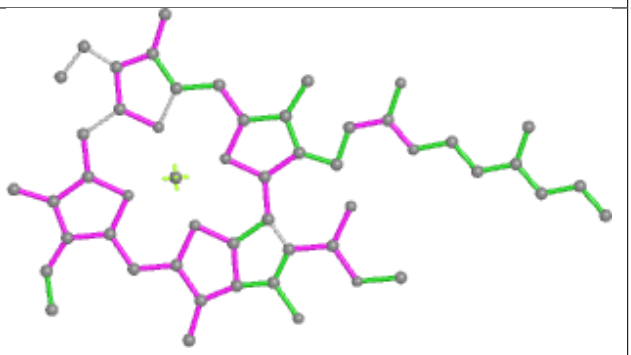
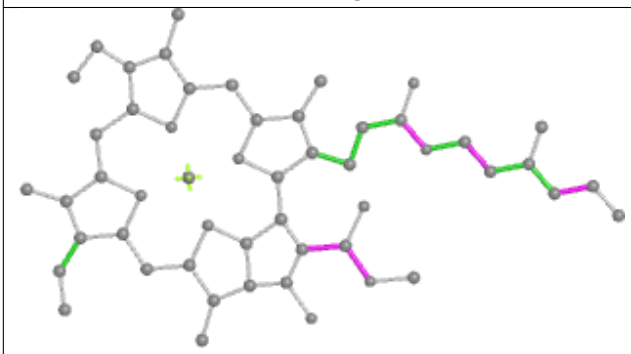
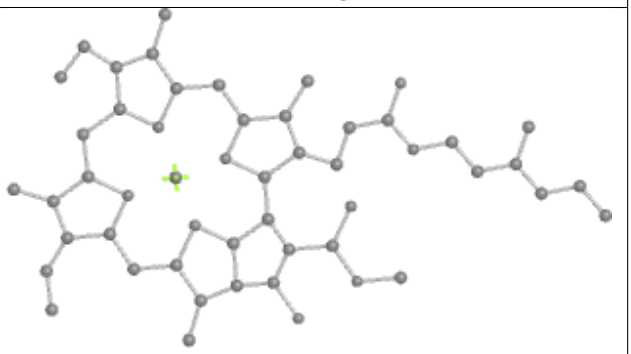
Bond angles



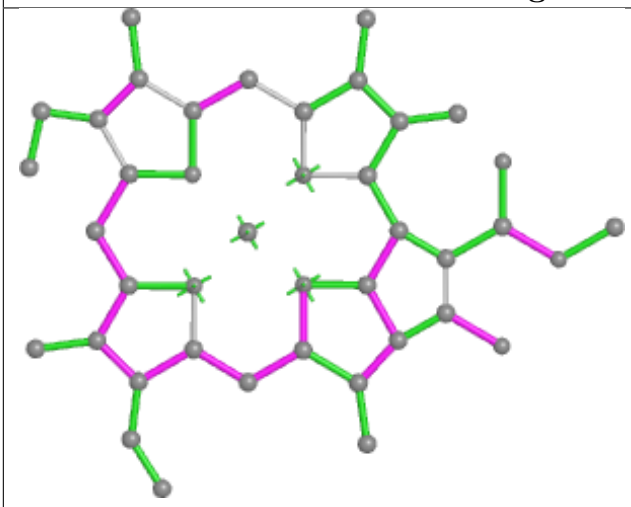
Torsions



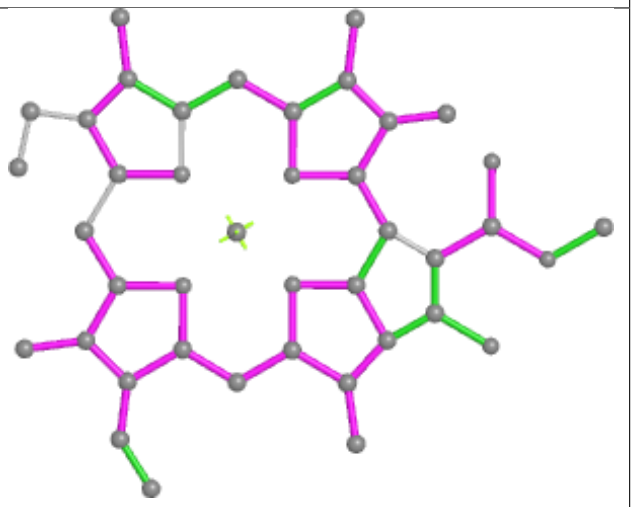
Rings

Ligand CLA 5 310	
	
Bond lengths	**Bond angles**
	
Torsions	**Rings**

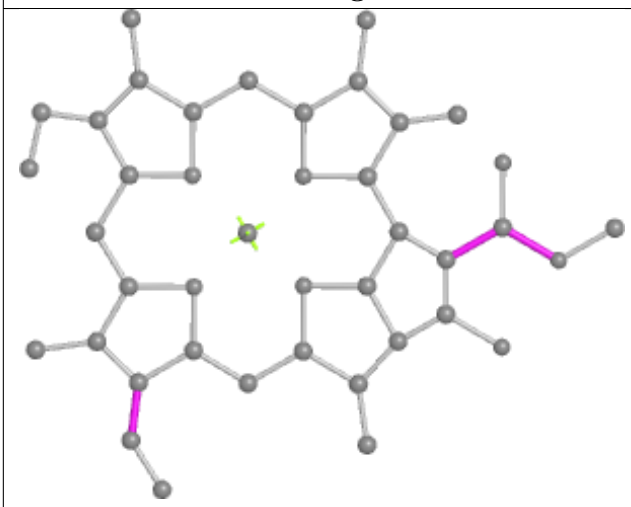
Ligand CLA 7 310



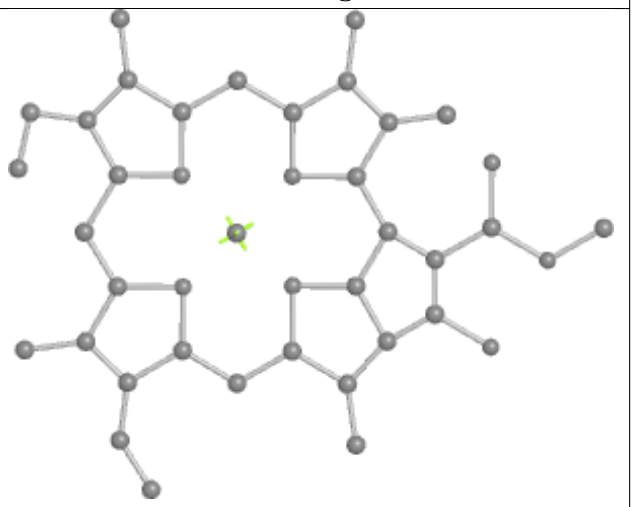
Bond lengths



Bond angles

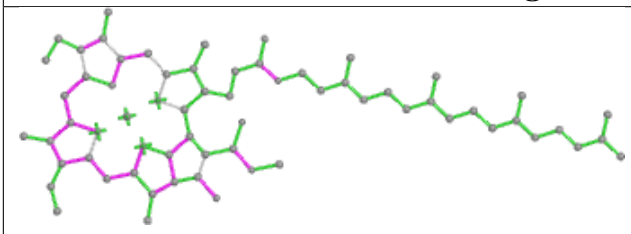


Torsions

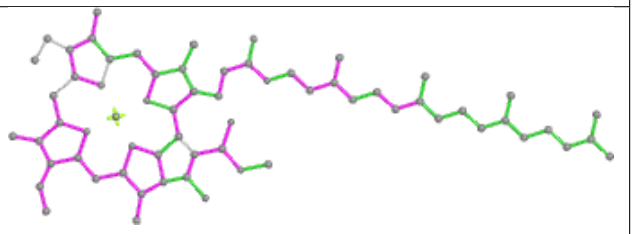


Rings

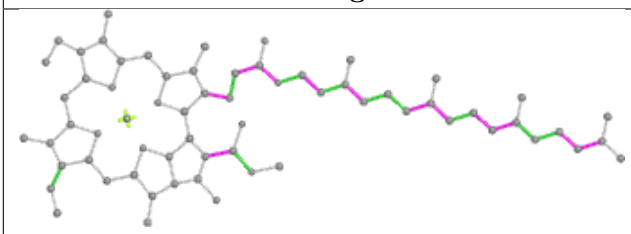
Ligand CLA A 859



Bond lengths



Bond angles



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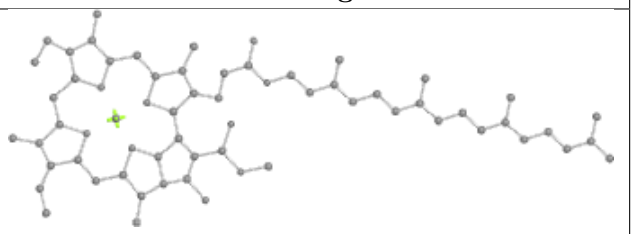
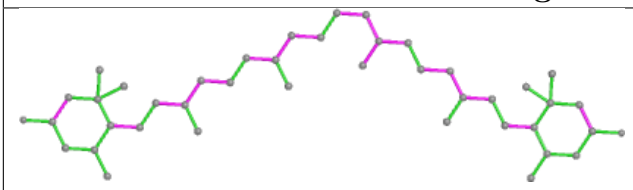
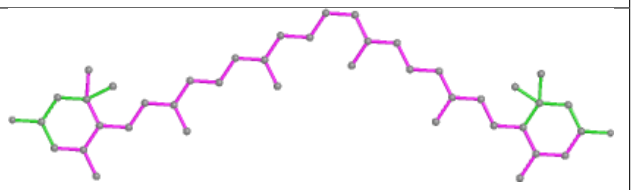


Rings

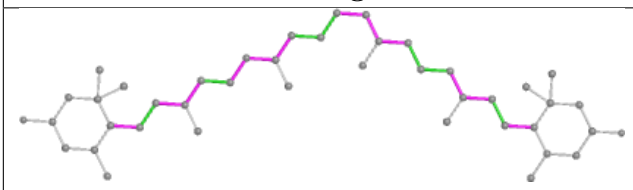
Ligand 5X6 5 321



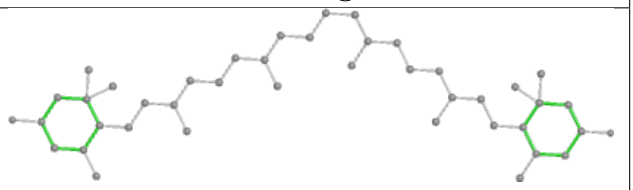
Bond lengths



Bond angles

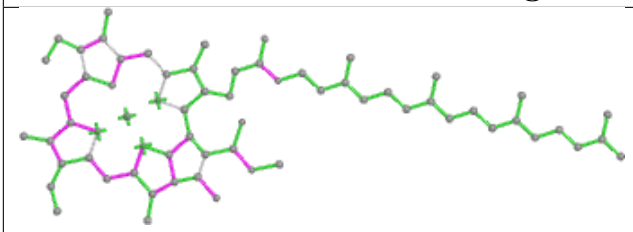


Torsions

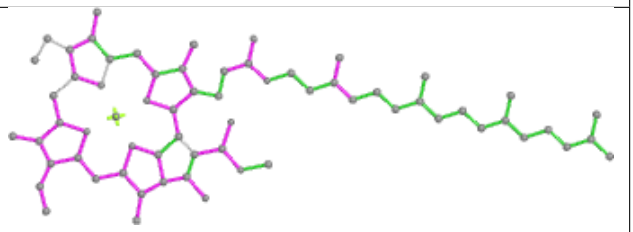


Rings

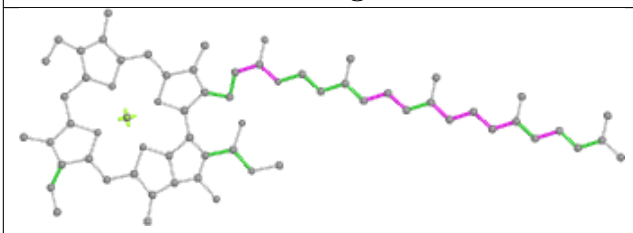
Ligand CLA A 839



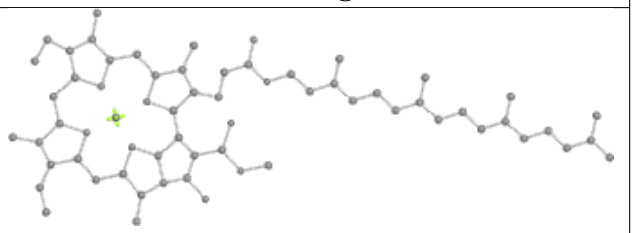
Bond lengths



Bond angles

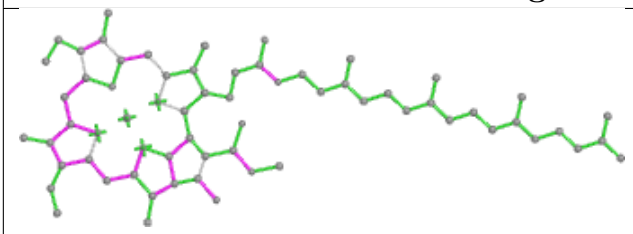


Torsions

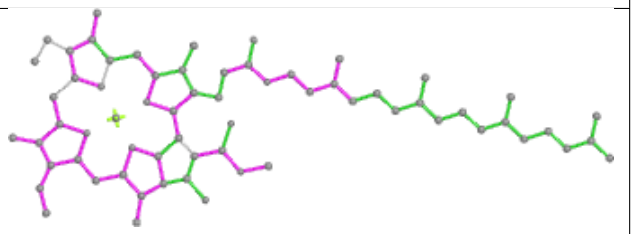


Rings

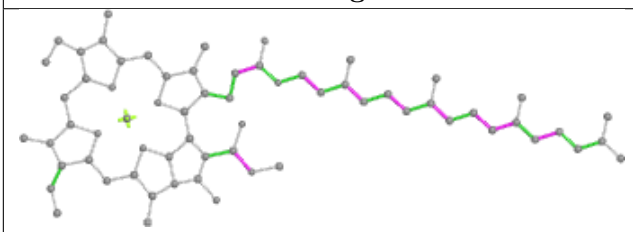
Ligand CLA 6 305



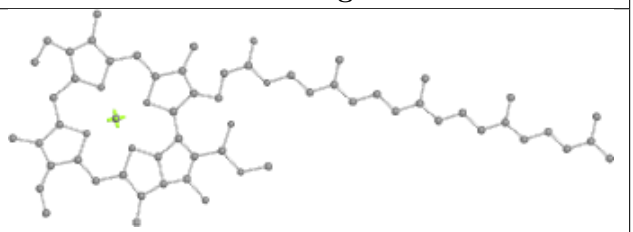
Bond lengths



Bond angles

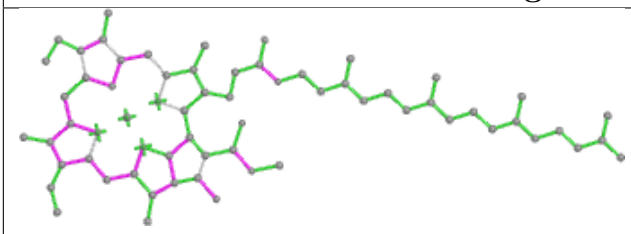


Torsions

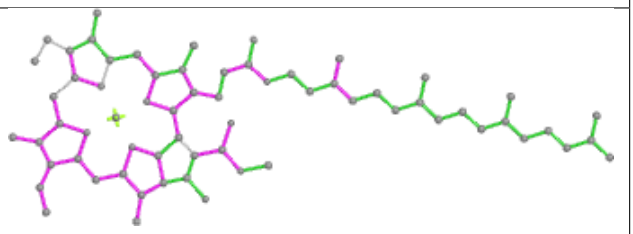


Rings

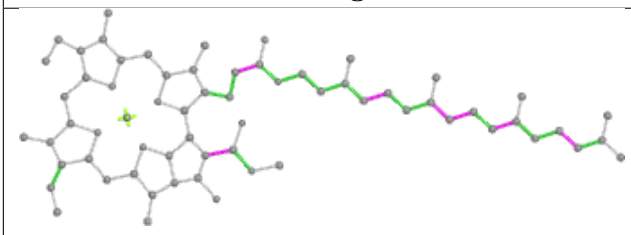
Ligand CLA B 809



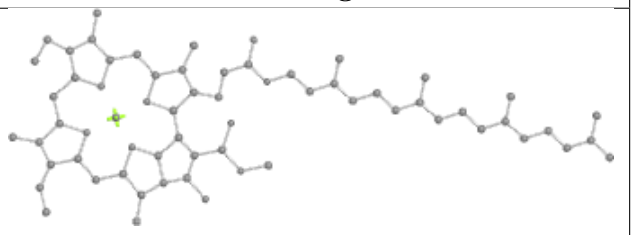
Bond lengths



Bond angles

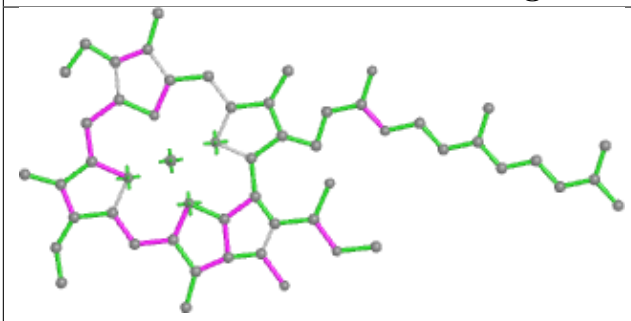


Torsions

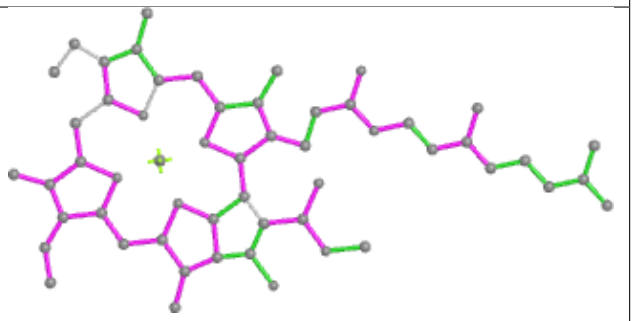


Rings

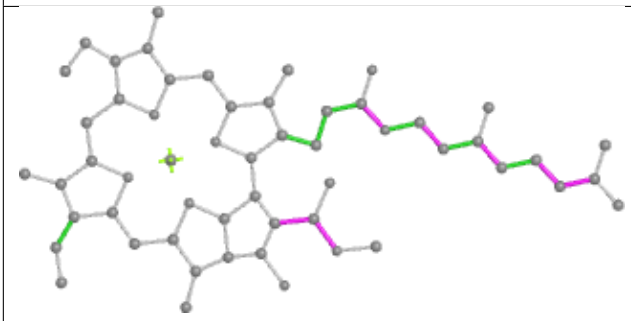
Ligand CLA A 808



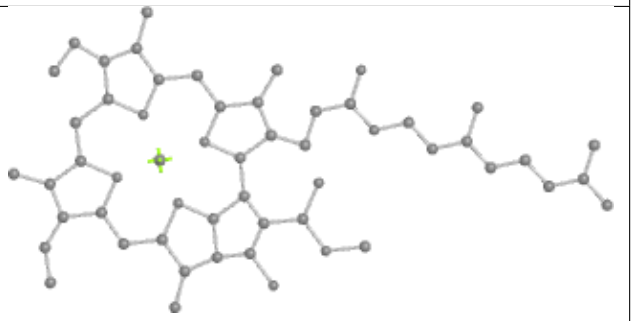
Bond lengths



Bond angles

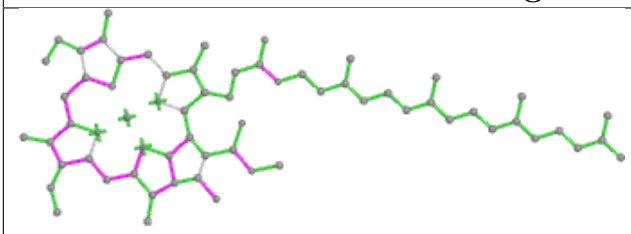


Torsions

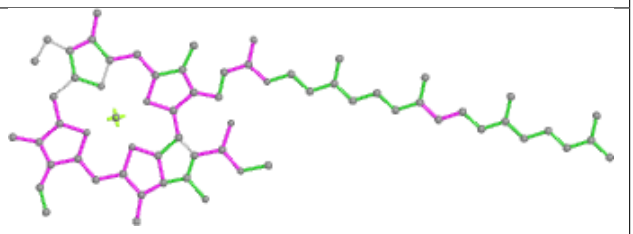


Rings

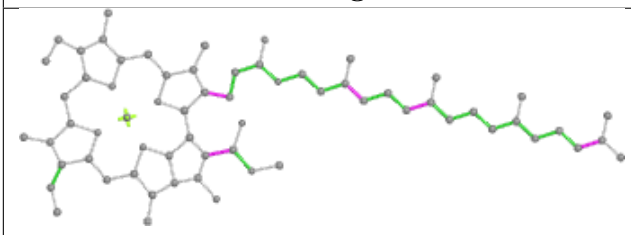
Ligand CLA B 802



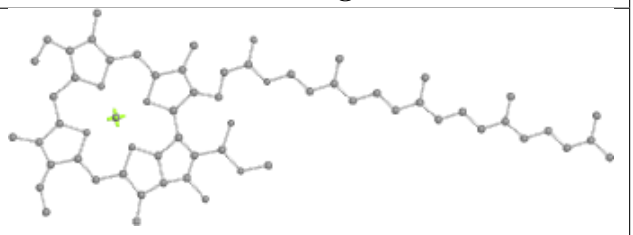
Bond lengths



Bond angles

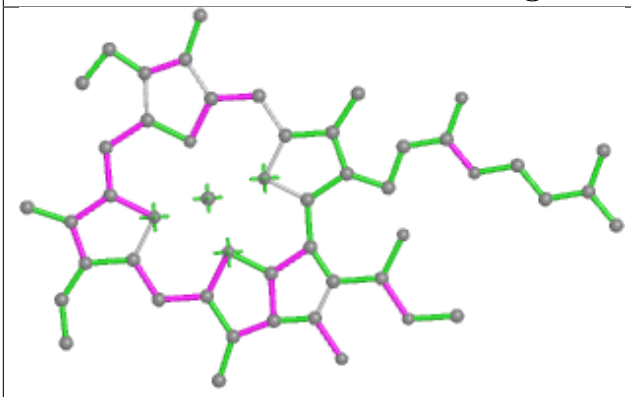


Torsions

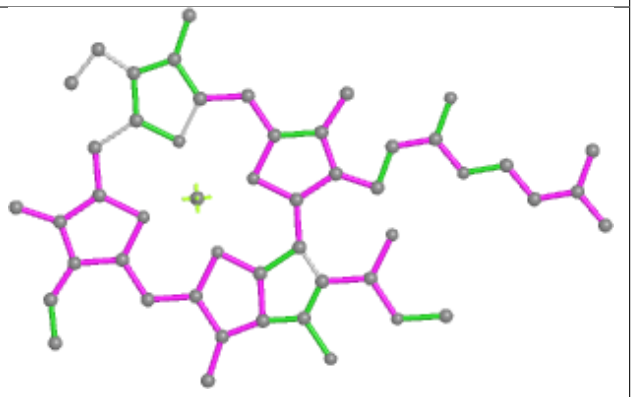


Rings

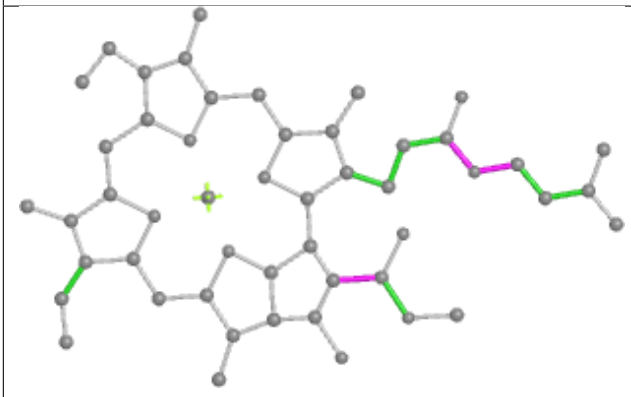
Ligand CLA A 829



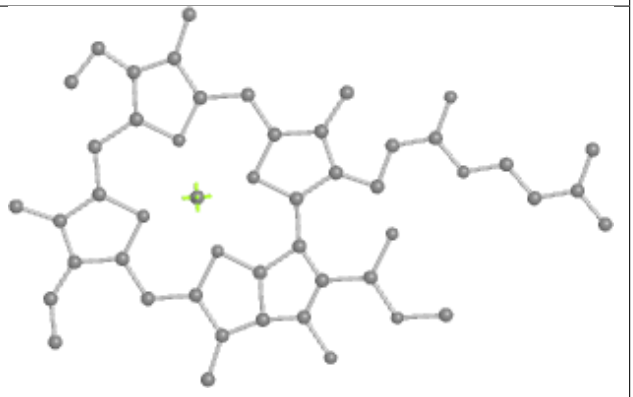
Bond lengths



Bond angles

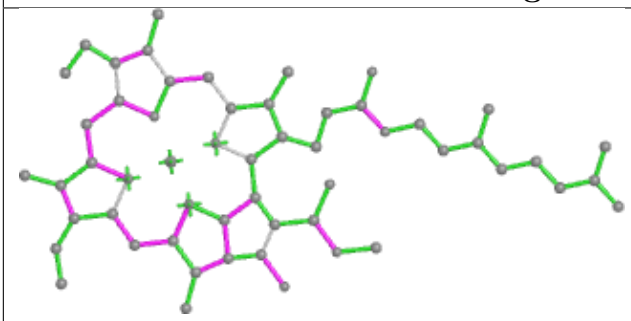


Torsions

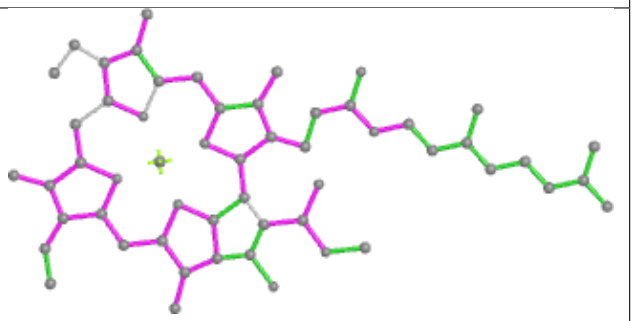


Rings

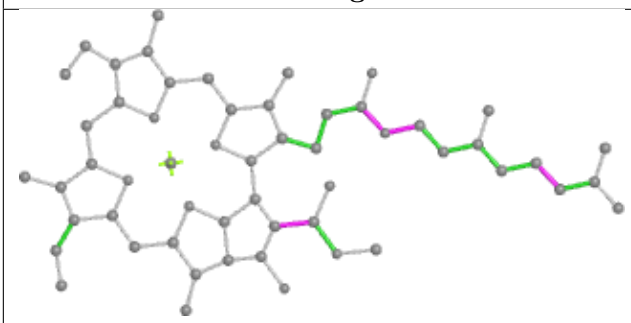
Ligand CLA A 824



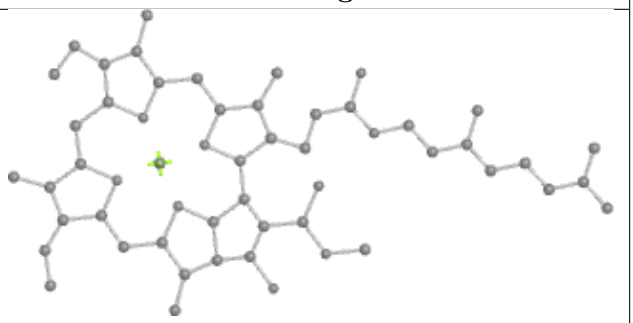
Bond lengths



Bond angles

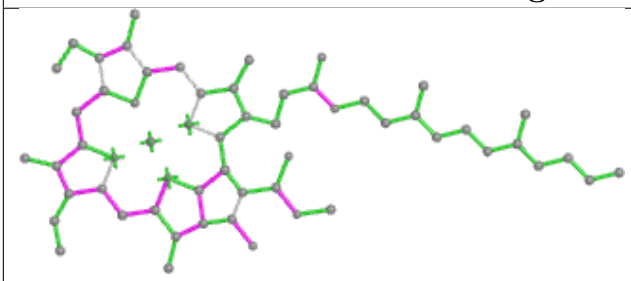


Torsions

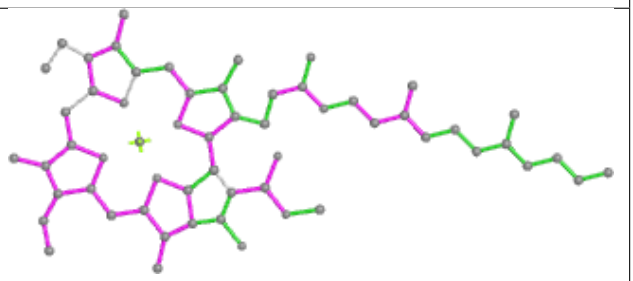


Rings

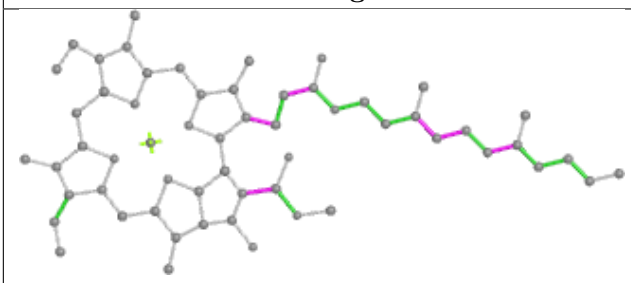
Ligand CLA 2 303



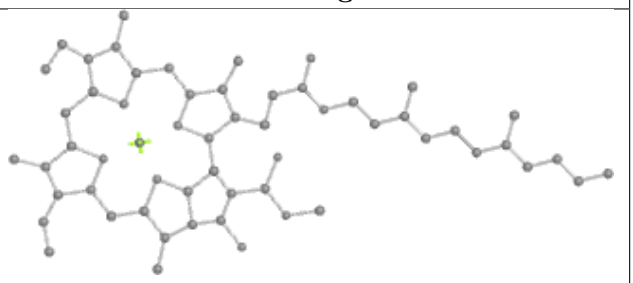
Bond lengths



Bond angles

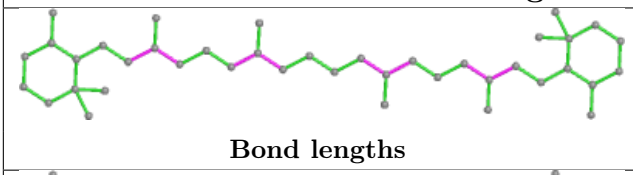


Torsions

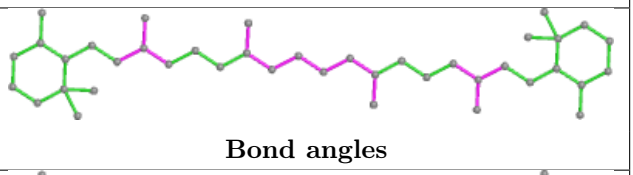


Rings

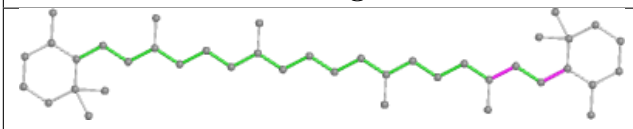
Ligand BCR 1 301



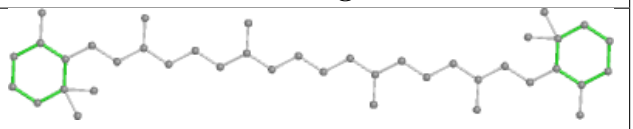
Bond lengths



Bond angles

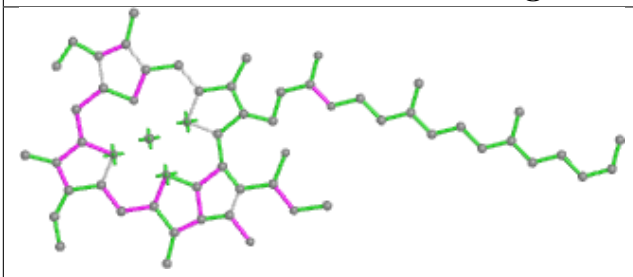


Torsions

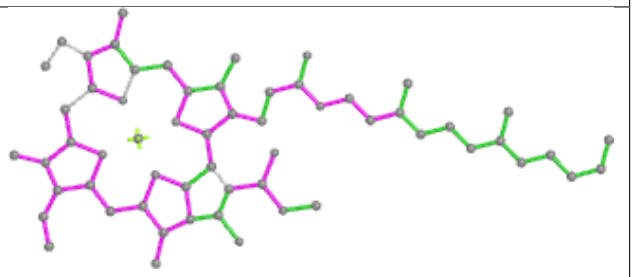


Rings

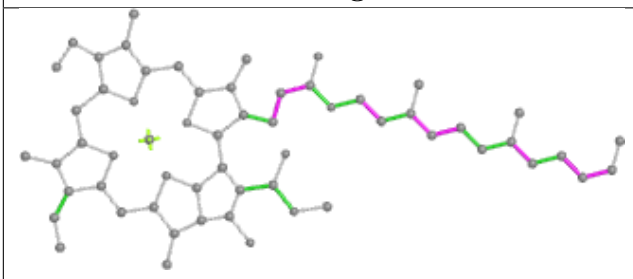
Ligand CLA B 817



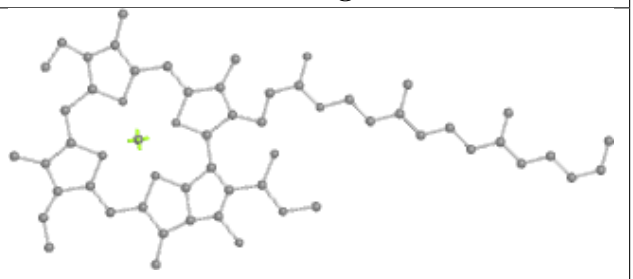
Bond lengths



Bond angles

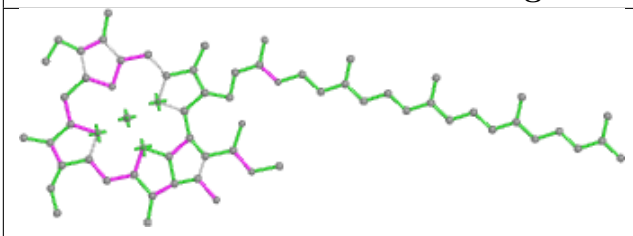


Torsions



Rings

Ligand CLA B 828



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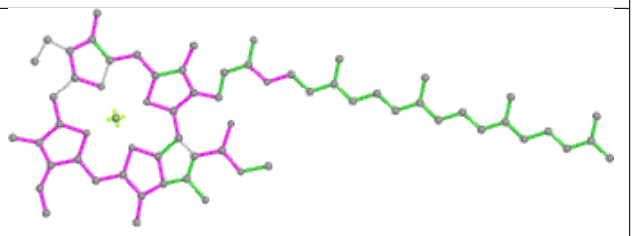
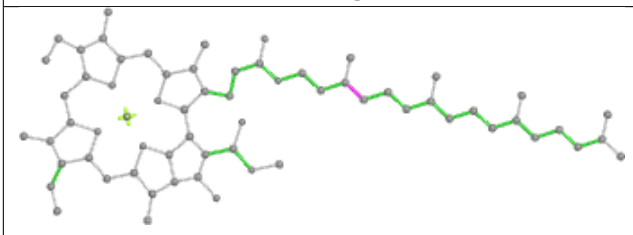


Bond angles



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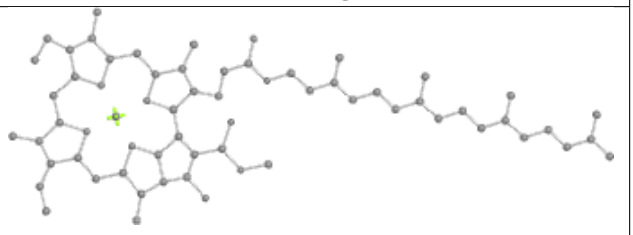
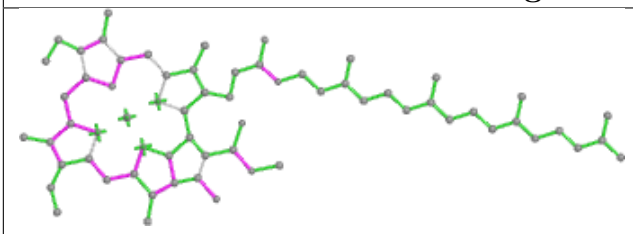
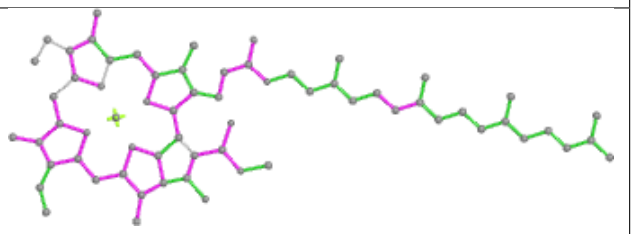


Rings

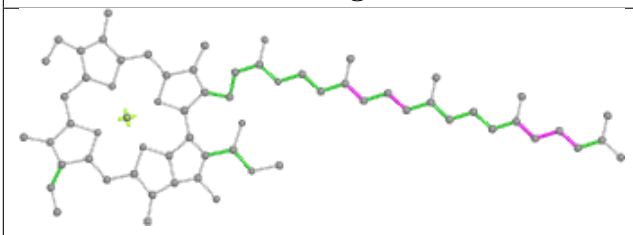
Ligand CLA B 832



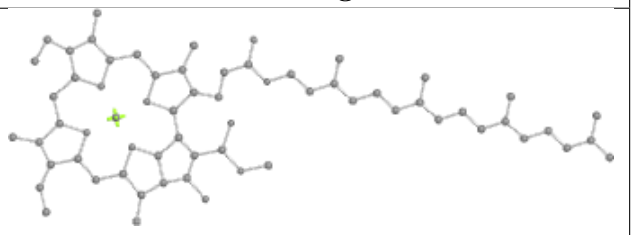
Bond lengths



Bond angles

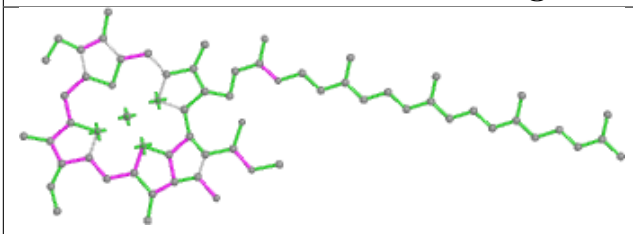


Torsions

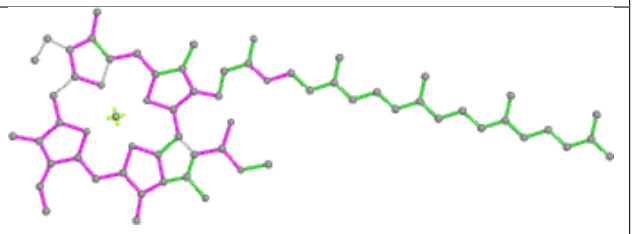


Rings

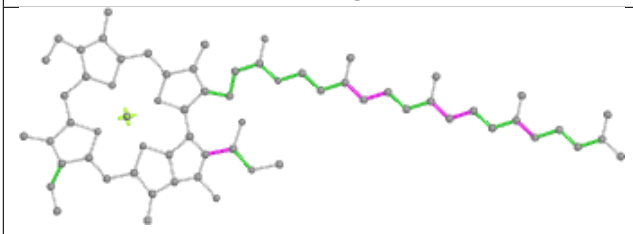
Ligand CLA 5 306



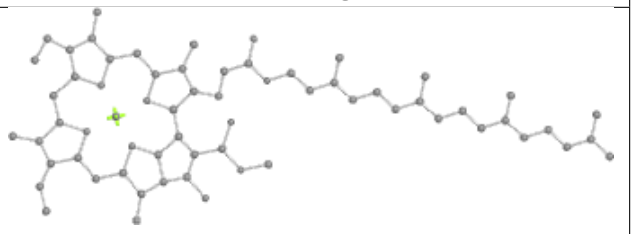
Bond lengths



Bond angles

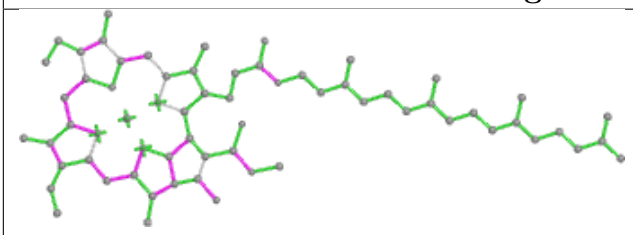


Torsions

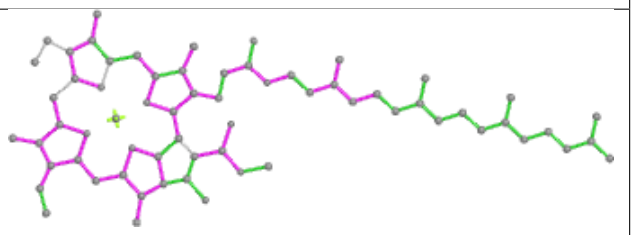


Rings

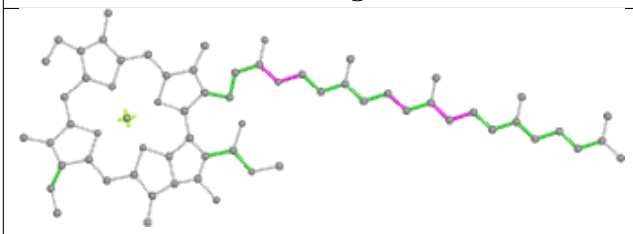
Ligand CLA B 835



Bond lengths



Bond angles



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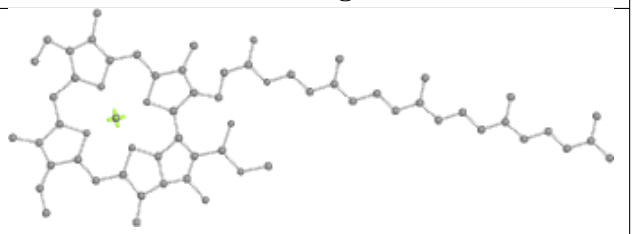
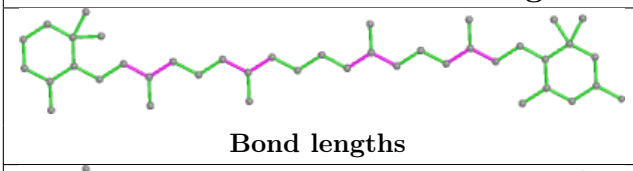


Rings

Ligand RRX 5 322



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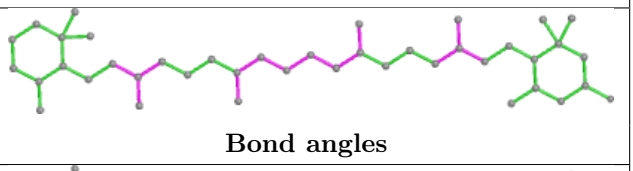
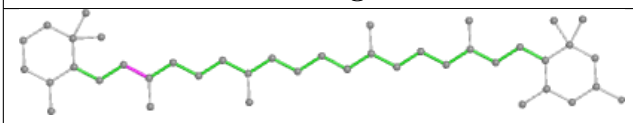


Bond angles



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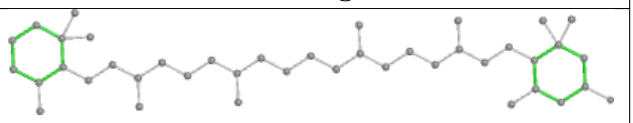
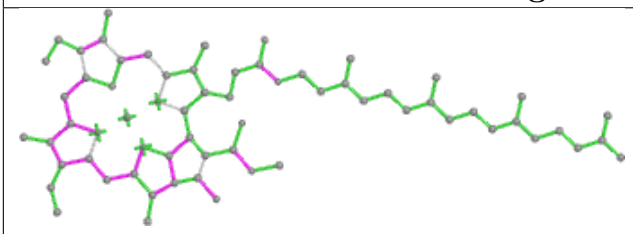
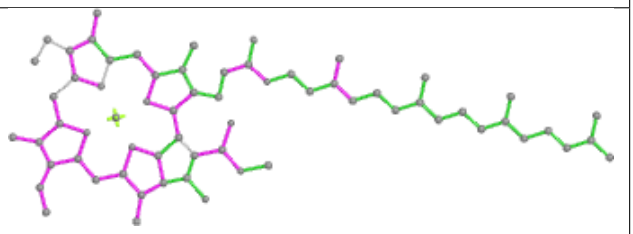


Rings

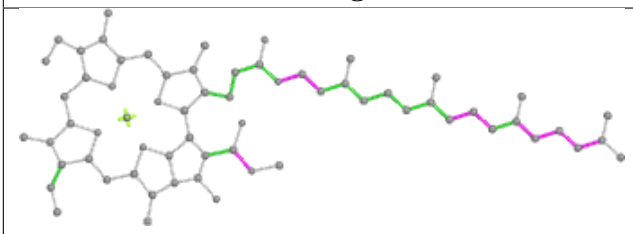
Ligand CLA 1 302



Bond lengths



Bond angles



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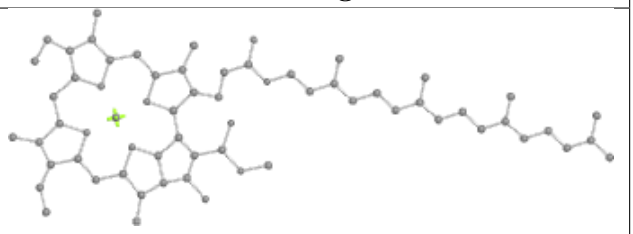
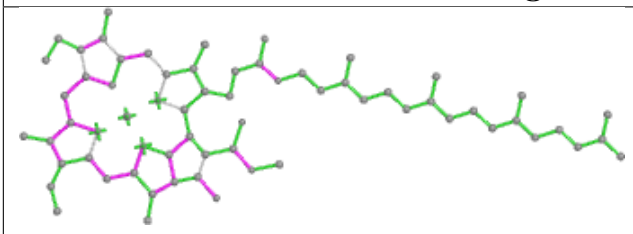
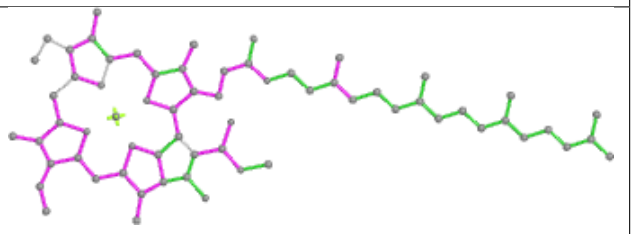


Rings

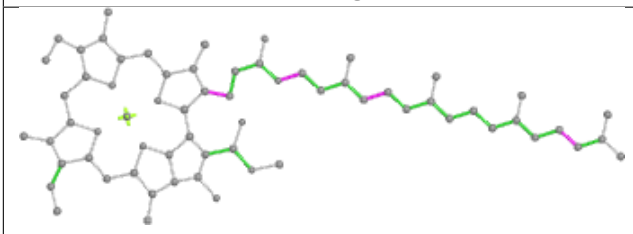
Ligand CLA B 827



Bond lengths



Bond angles



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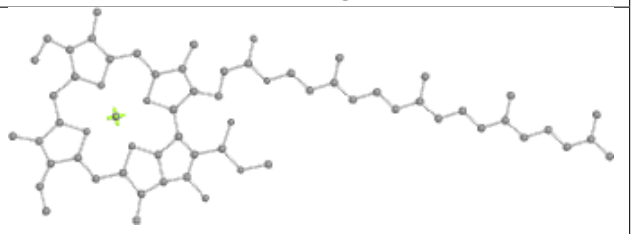
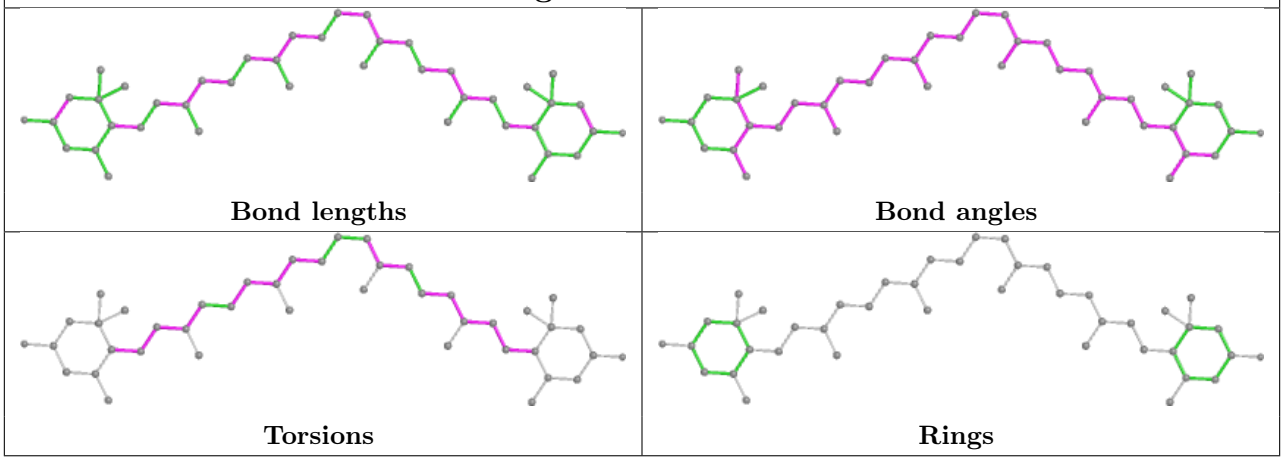
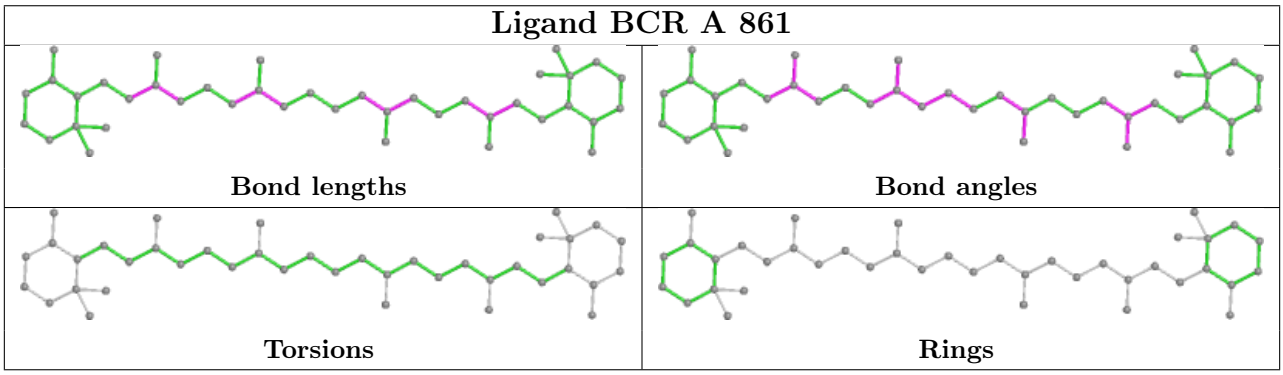


Rings

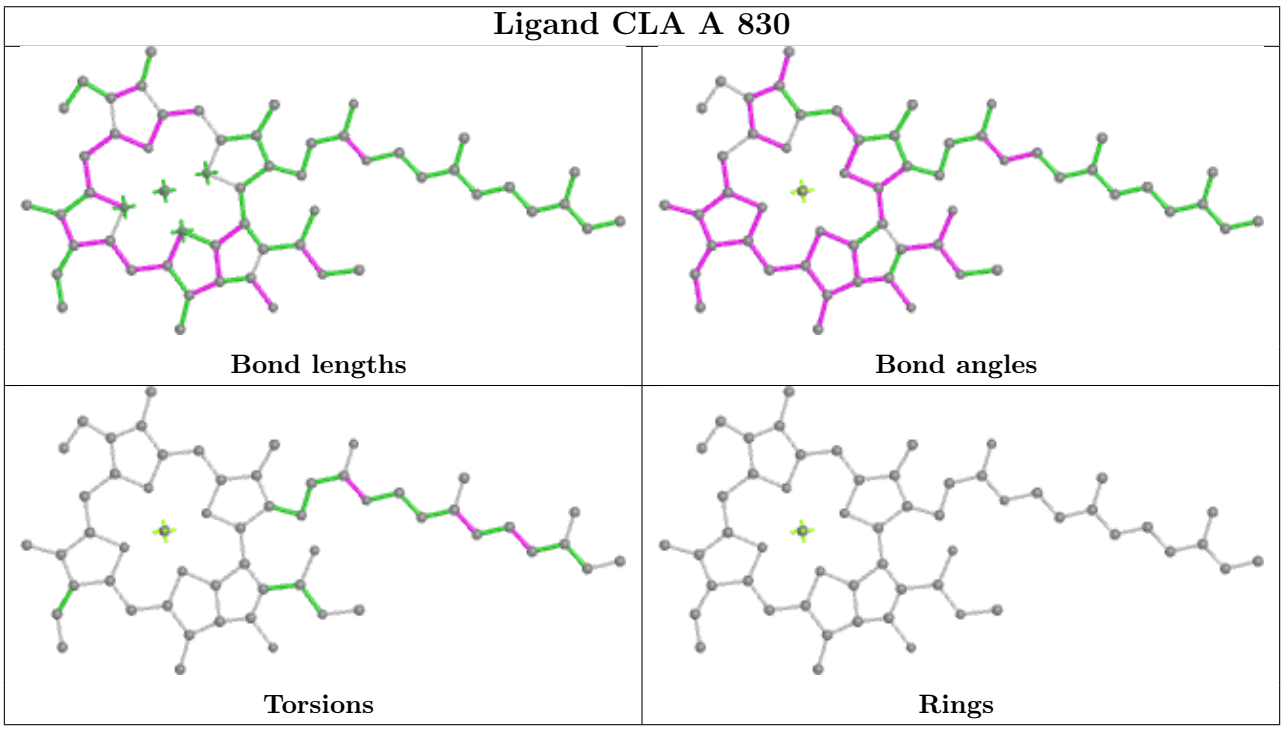
Ligand 5X6 7 317

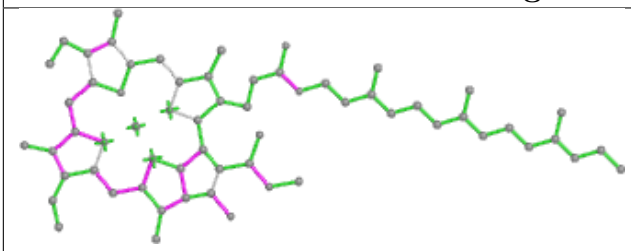
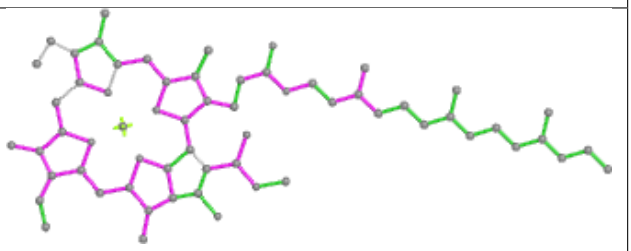
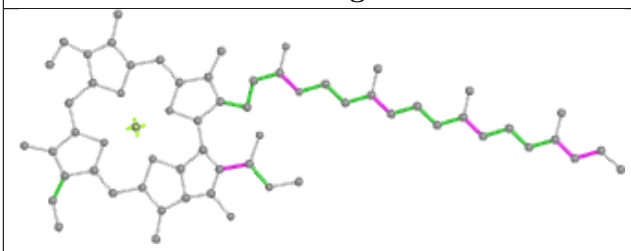
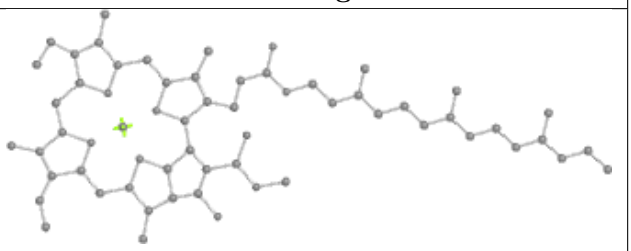


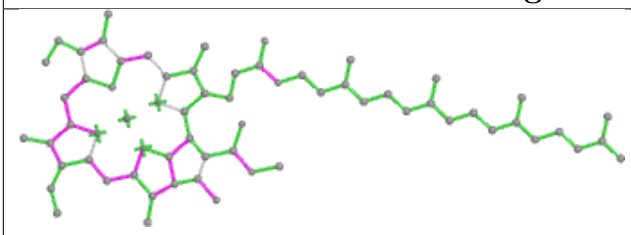
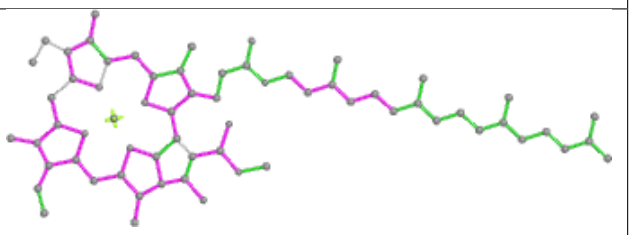
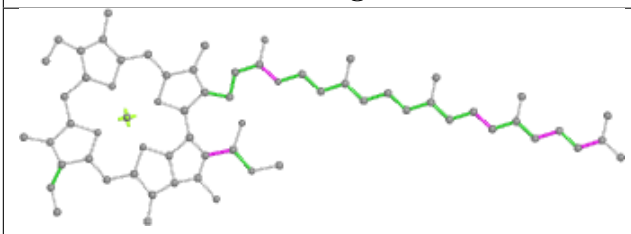
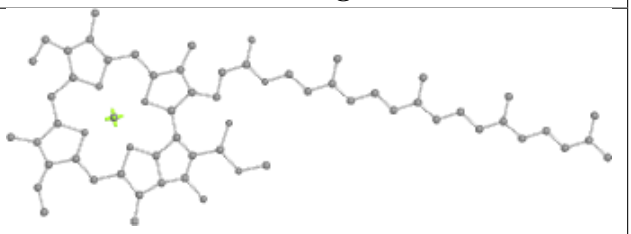
Ligand BCR A 861



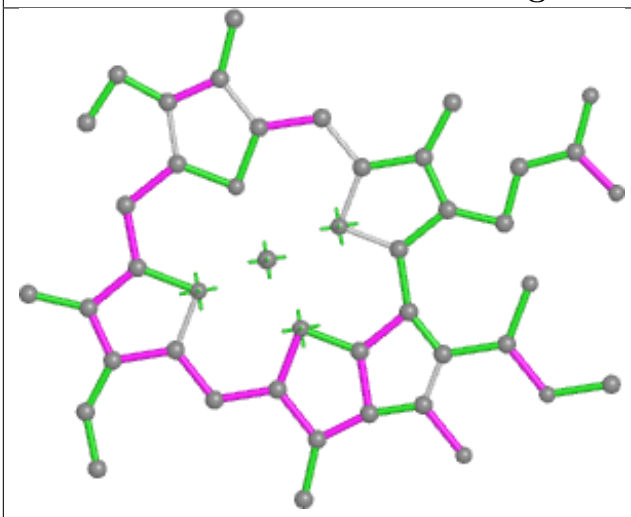
Ligand CLA A 830



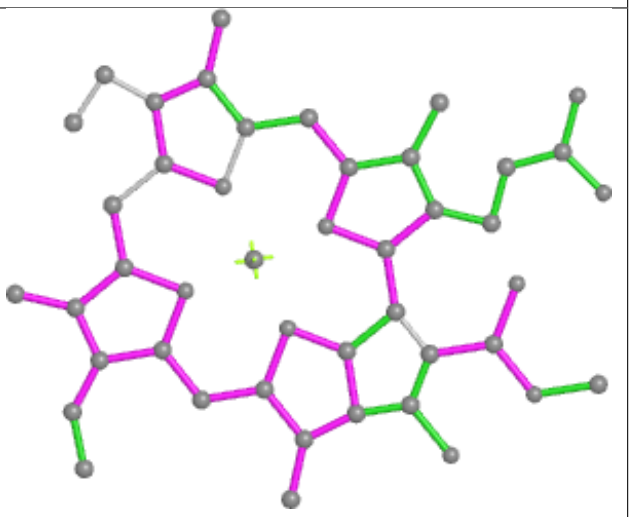
Ligand CLA A 815	
 Bond lengths	 Bond angles
 Torsions	 Rings

Ligand CLA B 816	
 Bond lengths	 Bond angles
 Torsions	 Rings

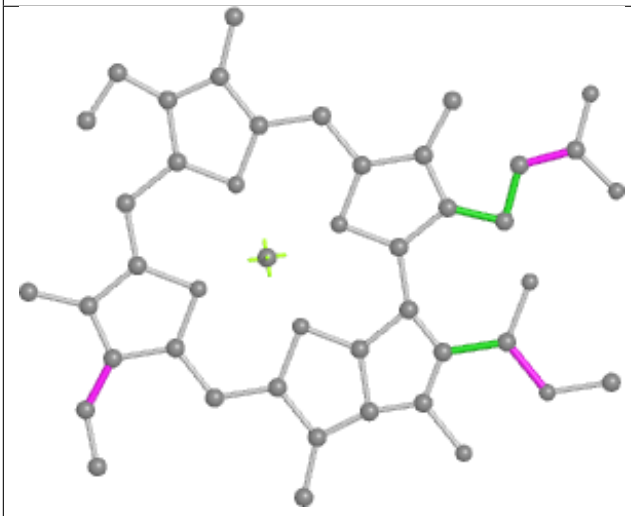
Ligand CLA 1 309



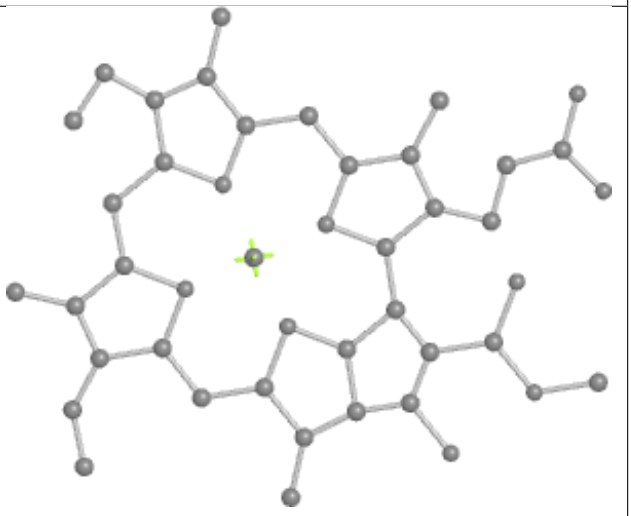
Bond lengths



Bond angles

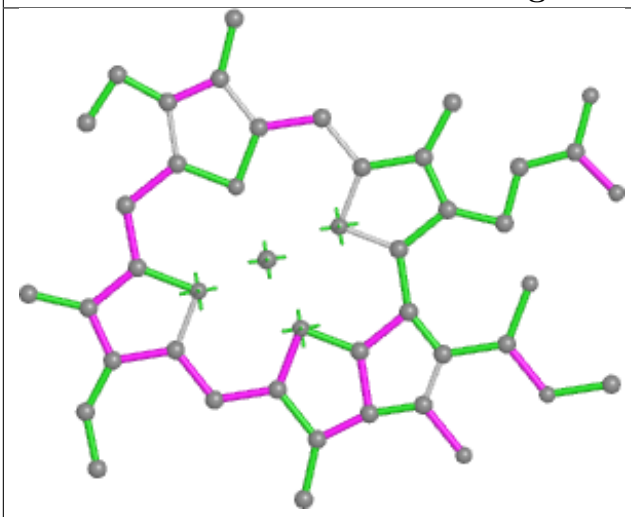


Torsions

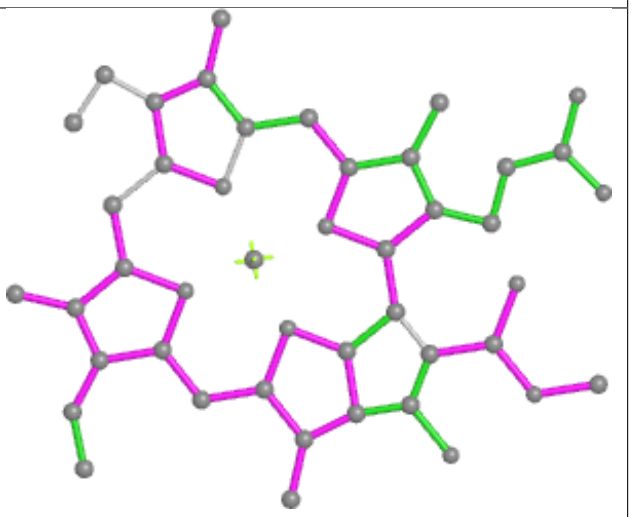


Rings

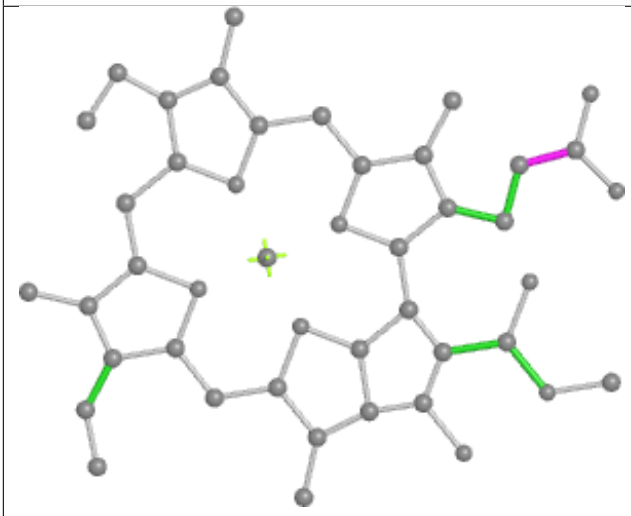
Ligand CLA 3 304



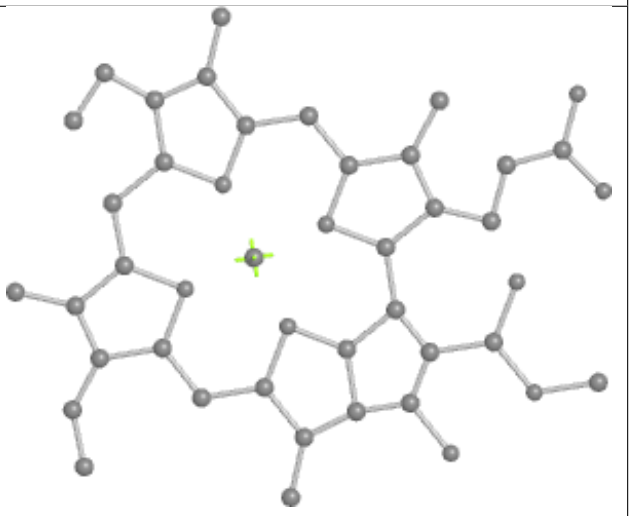
Bond lengths



Bond angles

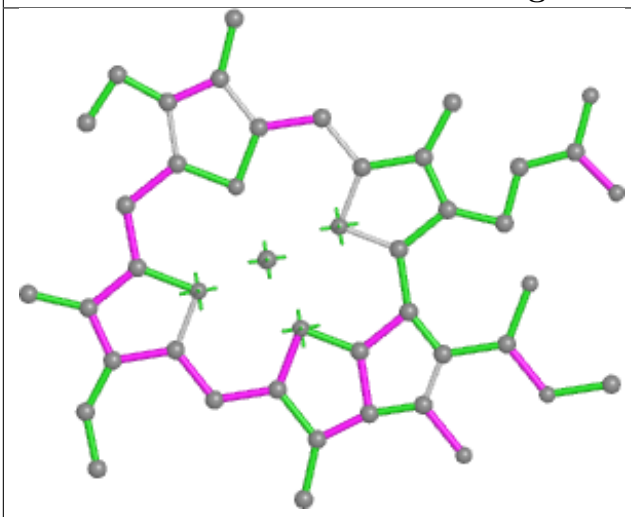


Torsions



Rings

Ligand CLA 4 306



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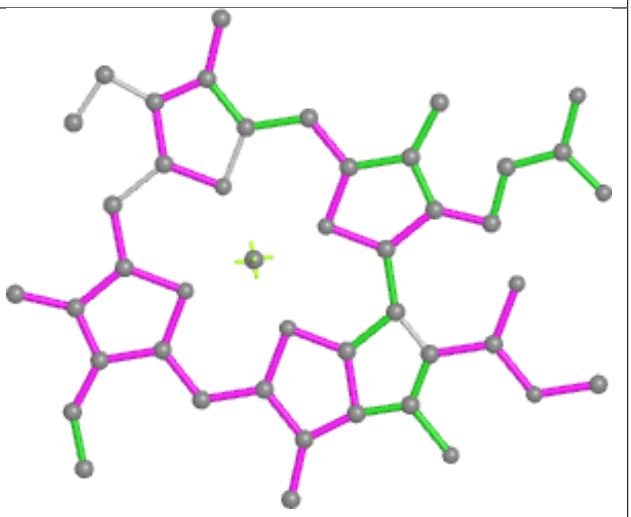
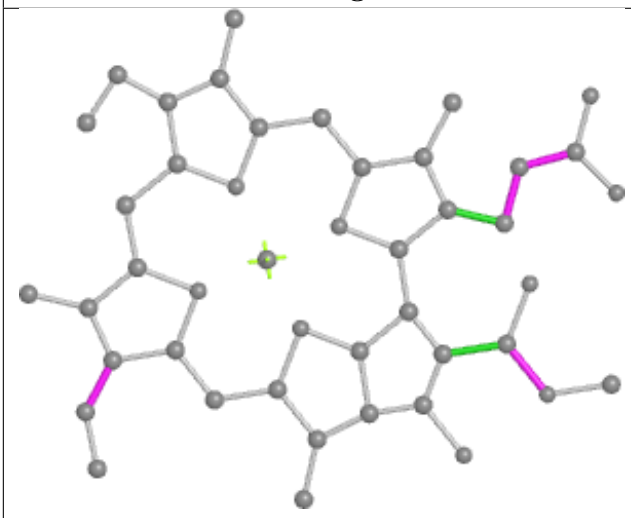
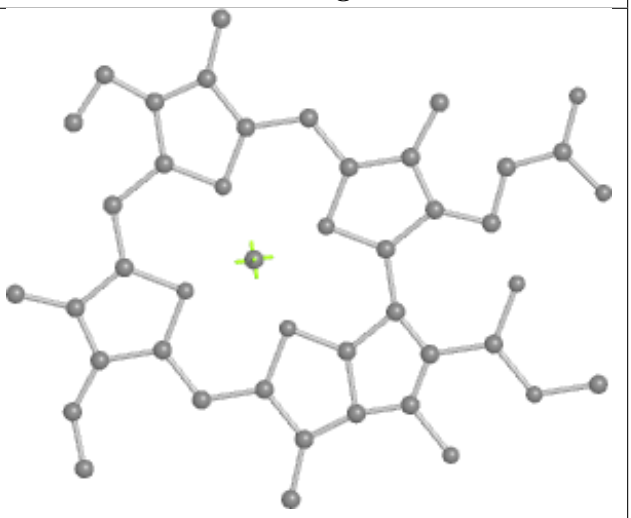


Bond angles

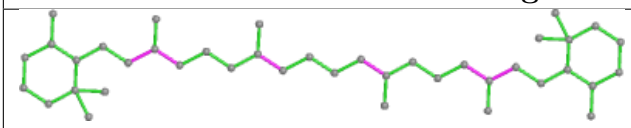


Torsions

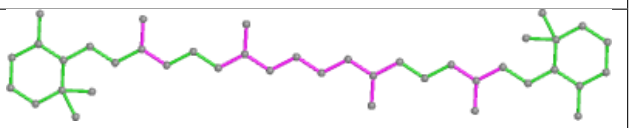


Rings

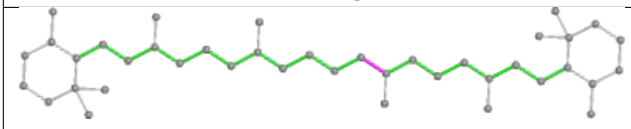
Ligand BCR K 103



Bond lengths



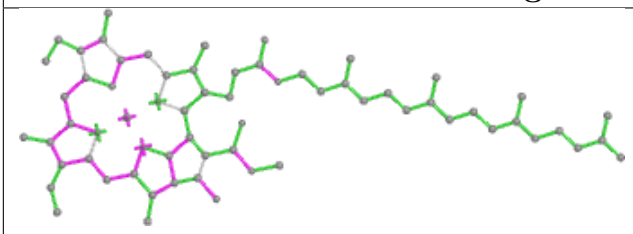
Bond angles



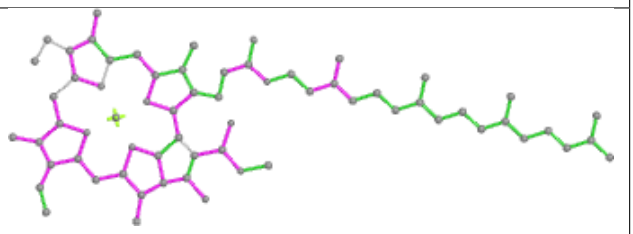
Torsions

Rings

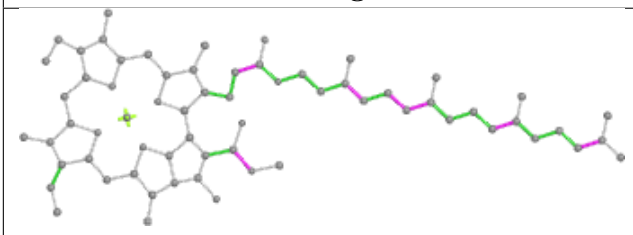
Ligand CLA B 806



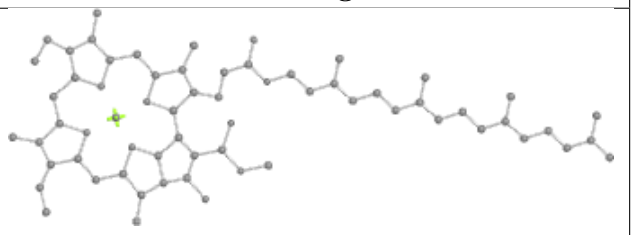
Bond lengths



Bond angles

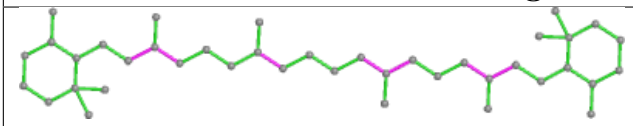


Torsions

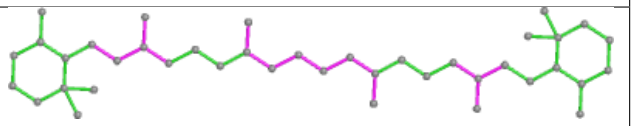


Rings

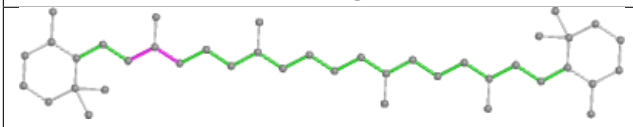
Ligand BCR L 202



Bond lengths



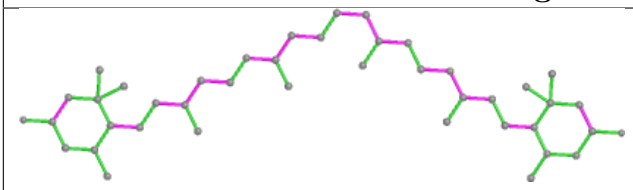
Bond angles



Torsions

Rings

Ligand 5X6 7 314



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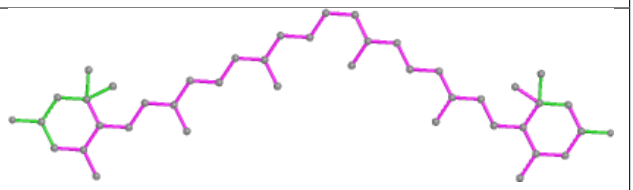
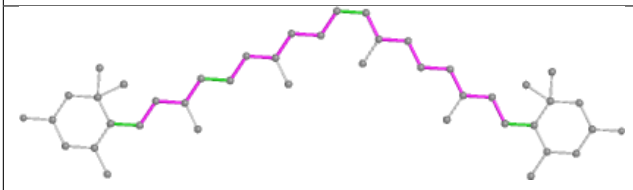
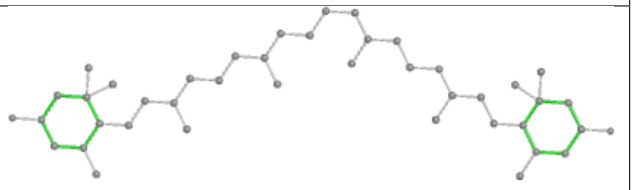


Bond angles

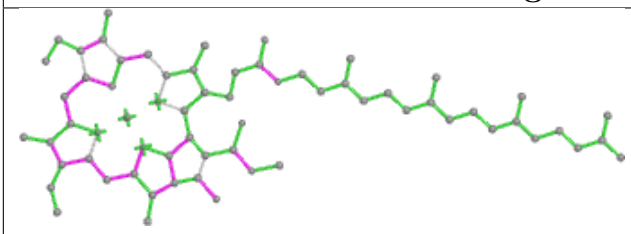


Torsions

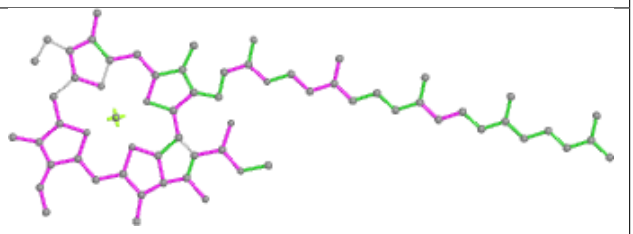


Rings

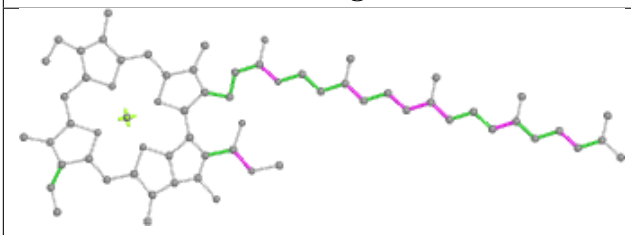
Ligand CLA B 838



Bond lengths



Bond angles



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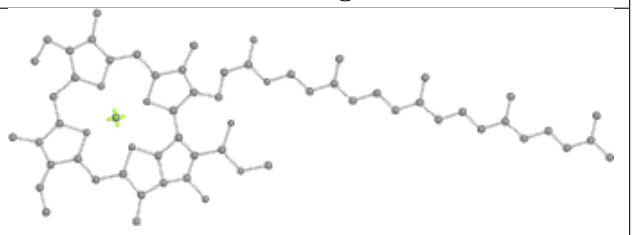
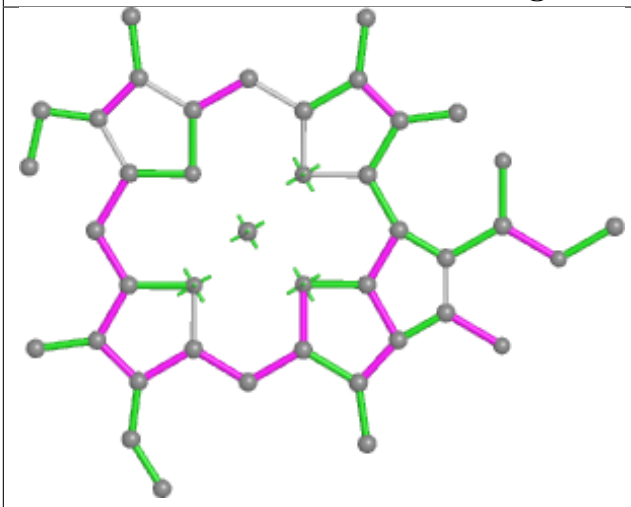
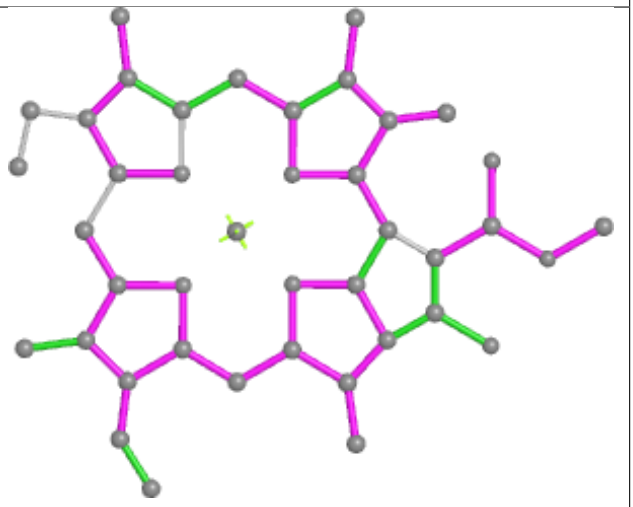


Rings

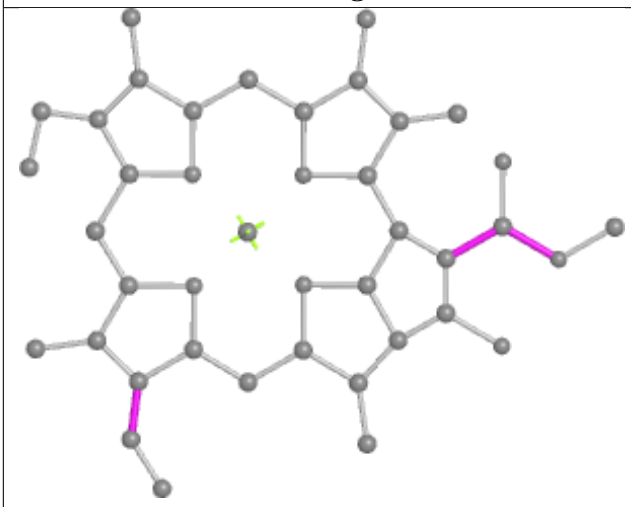
Ligand CLA 6 311



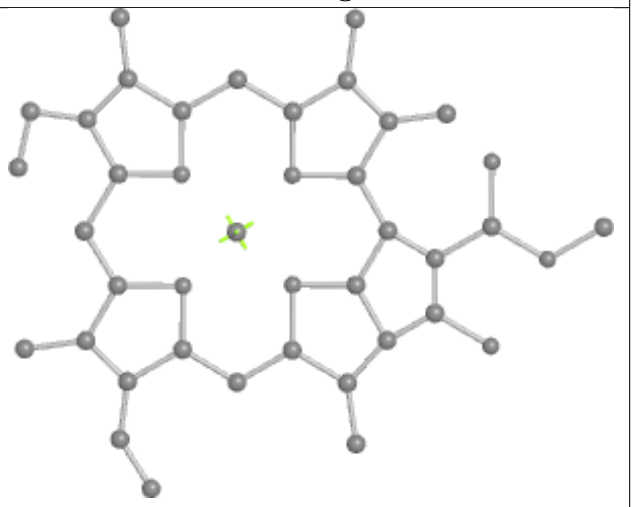
Bond lengths



Bond angles

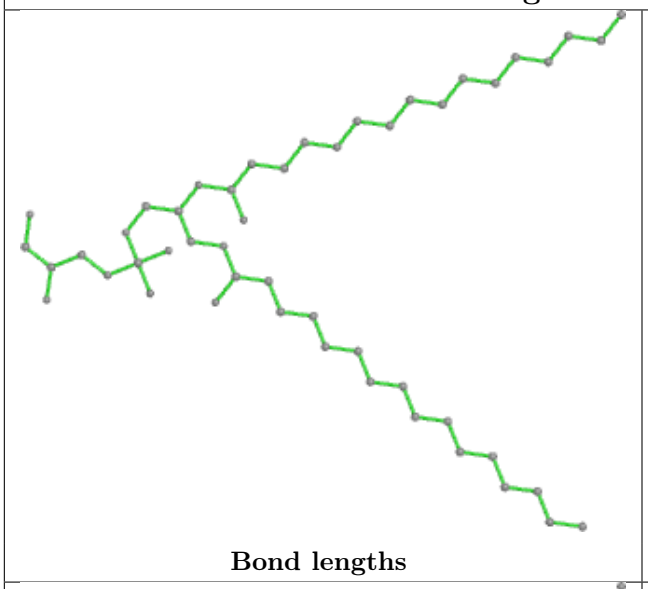


Torsions

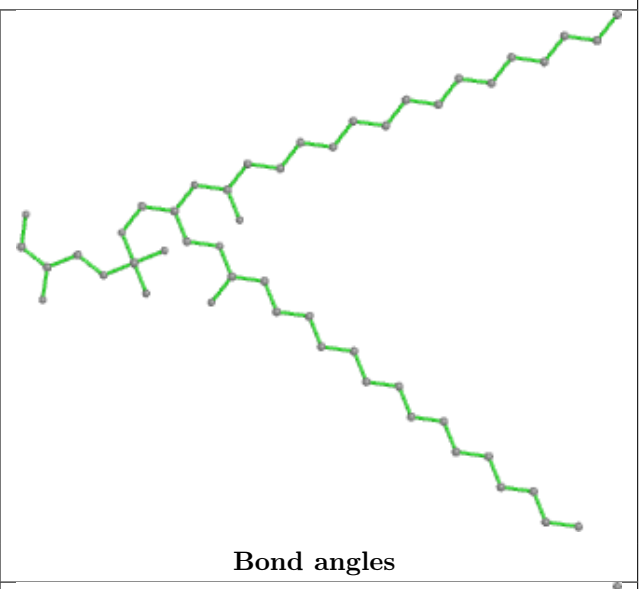


Rings

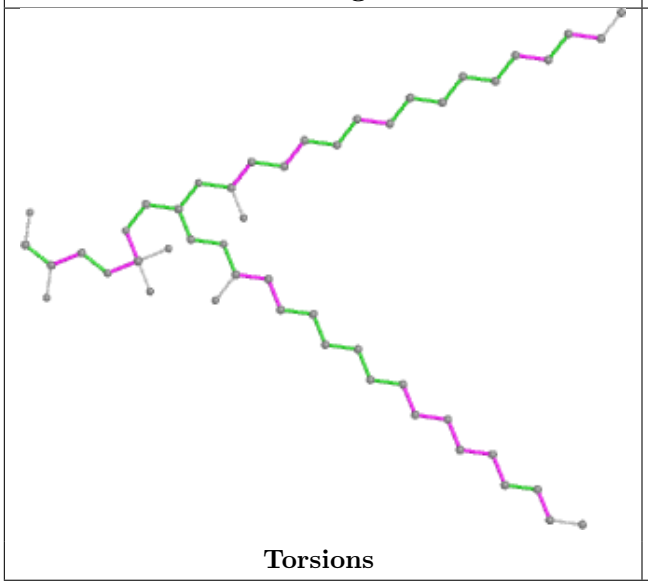
Ligand LHG A 841



Bond lengths



Bond angles



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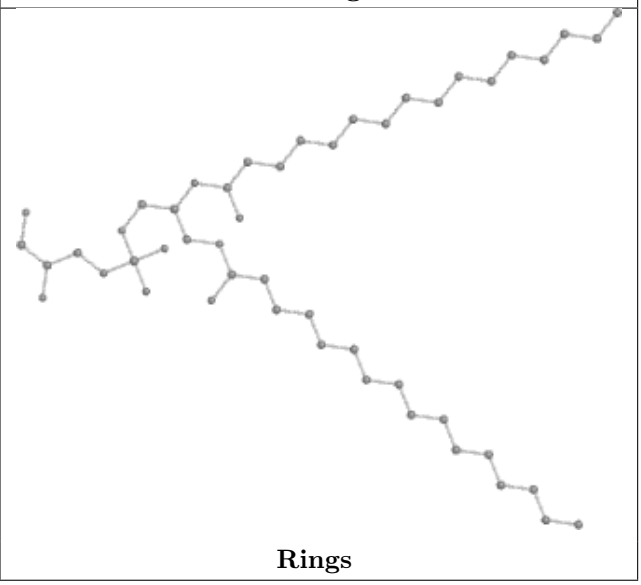
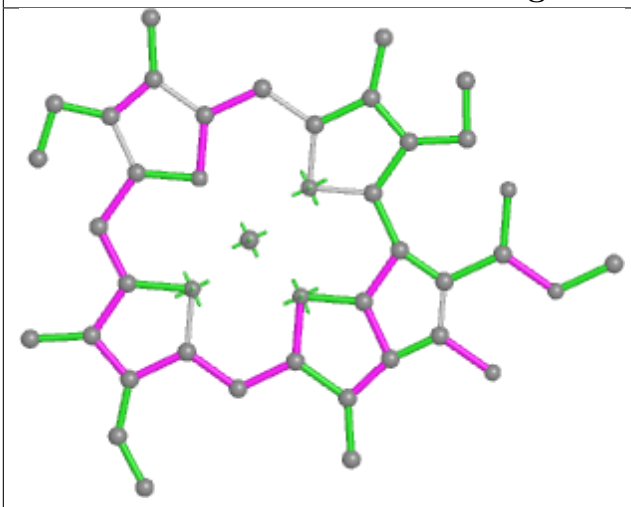
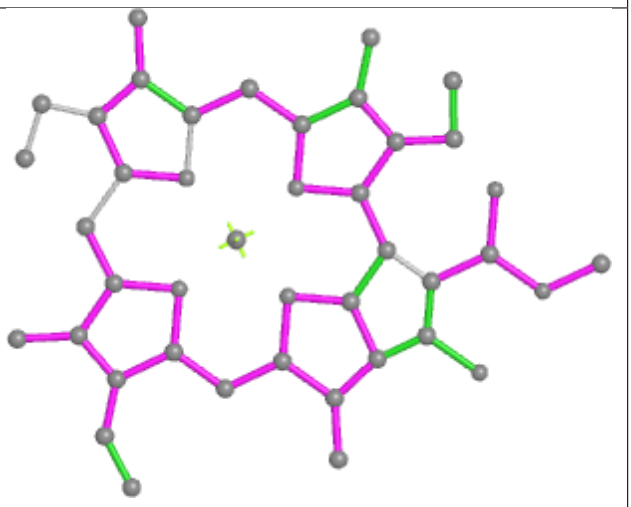


Rings

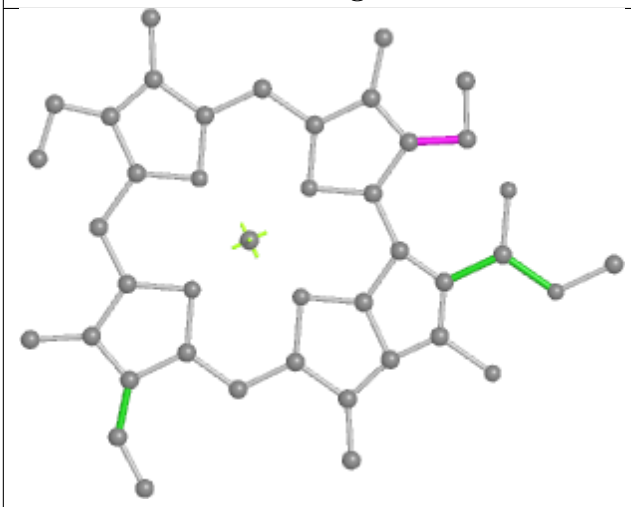
Ligand CLA J 102



Bond lengths



Bond angles



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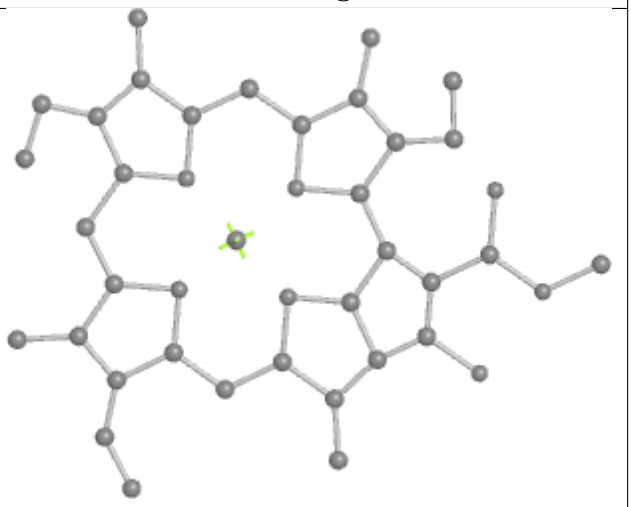
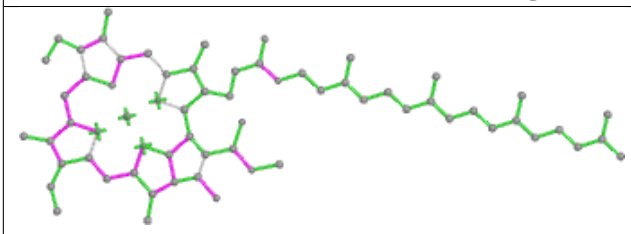
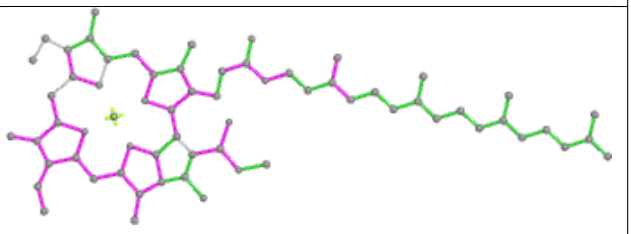


Rings

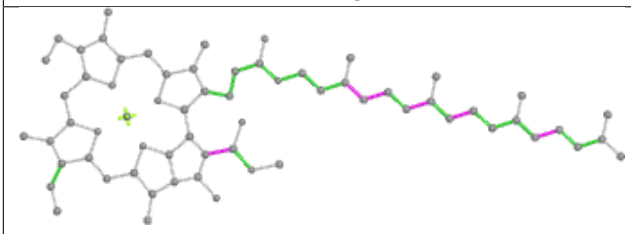
Ligand CLA B 807



Bond lengths



Bond angles



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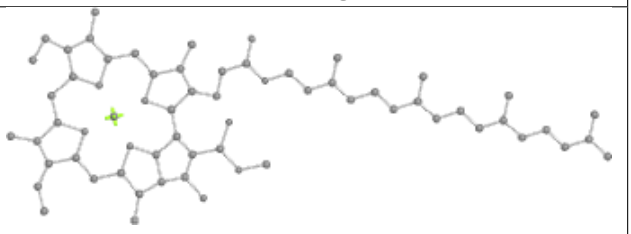
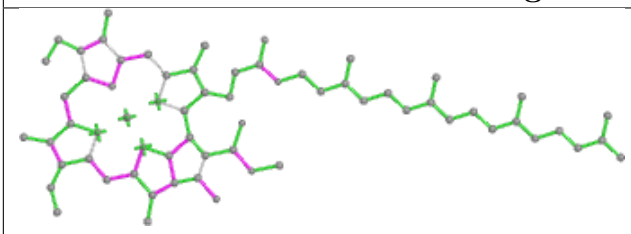
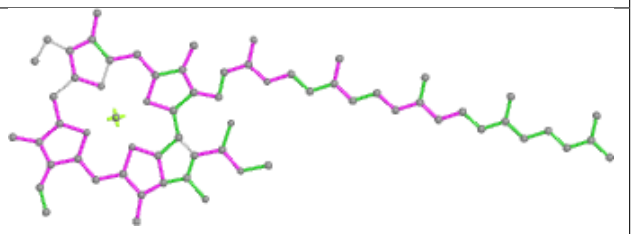


Rings

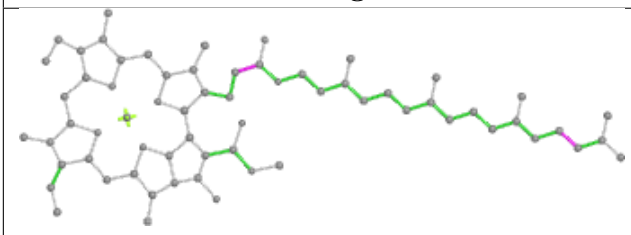
Ligand CLA B 801



Bond lengths



Bond angles



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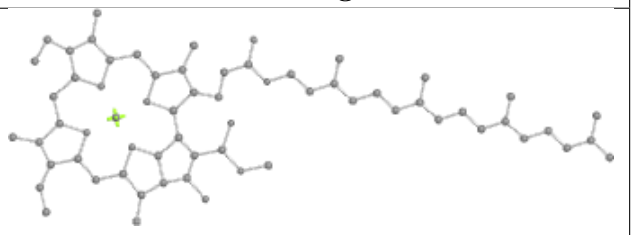
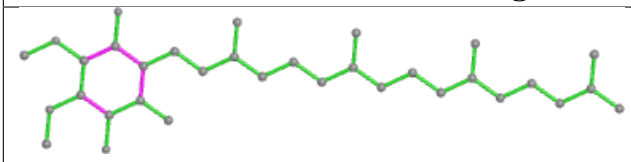


Rings

Ligand A1L64 B 840



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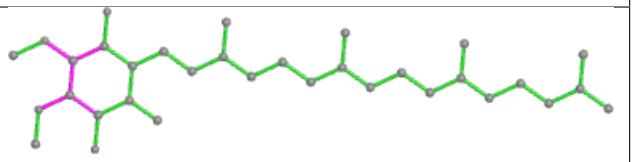
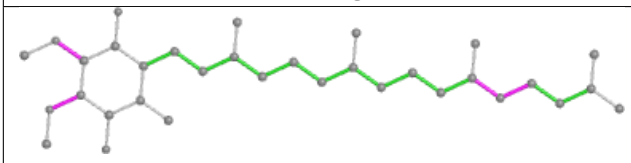


Bond angles



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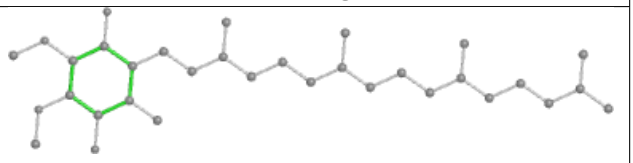
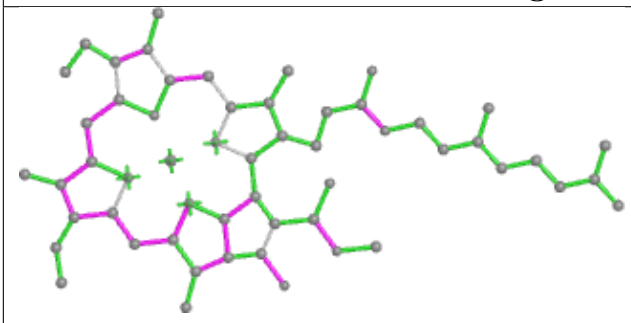


Rings

Ligand CLA 5 304



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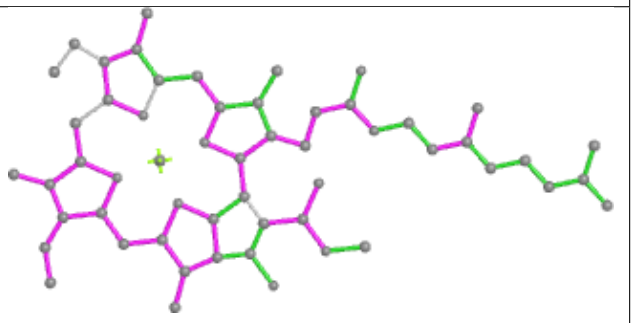
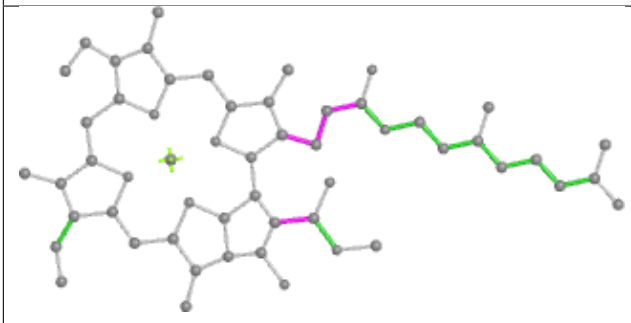


Bond angles



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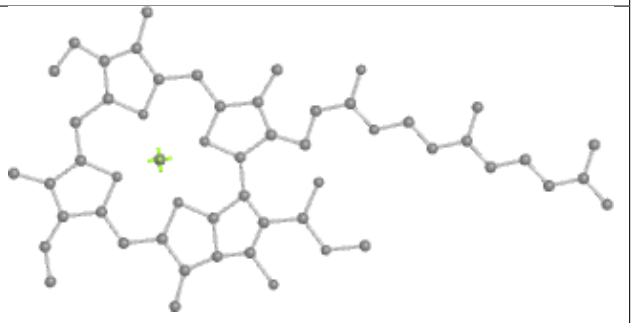
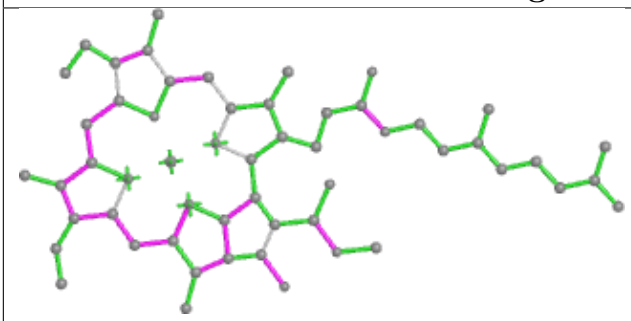


Rings

Ligand CLA 7 304



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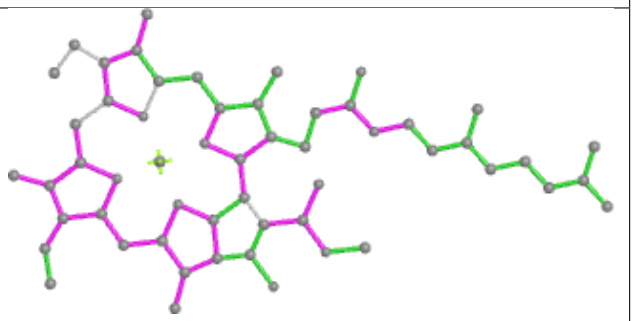
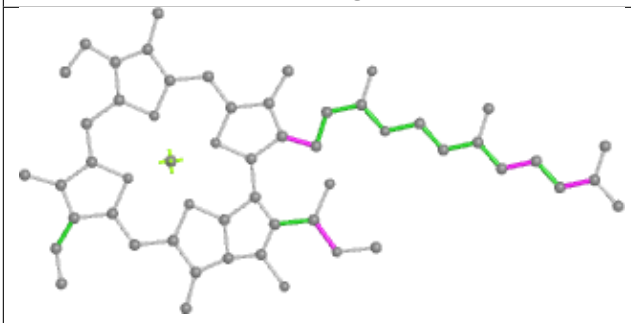


Bond angles



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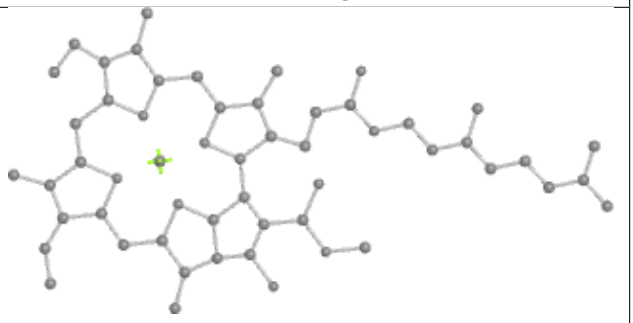
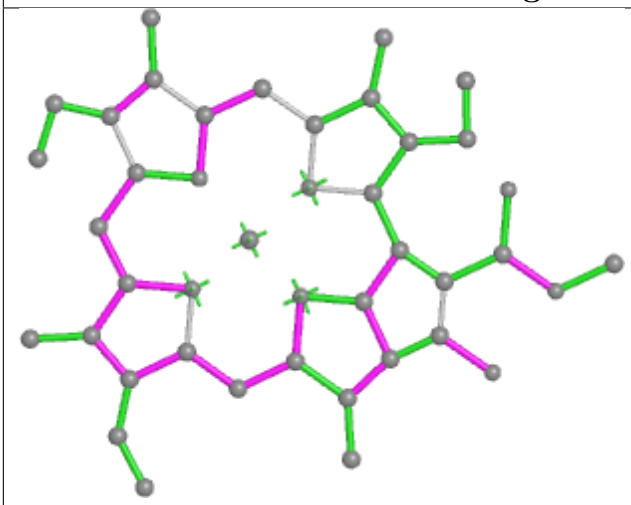


Rings

Ligand CLA K 102



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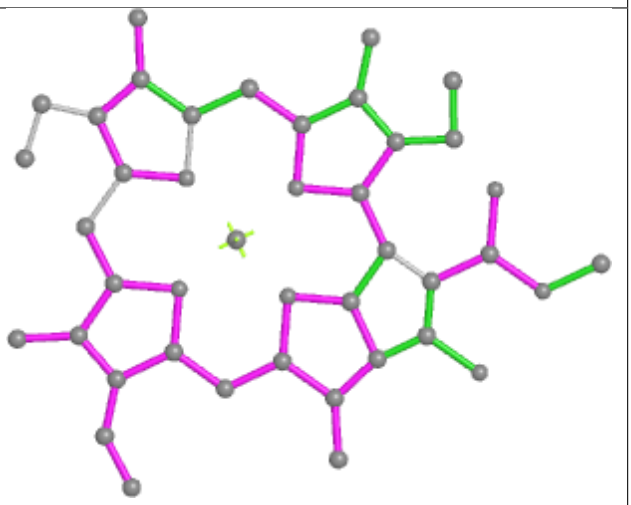
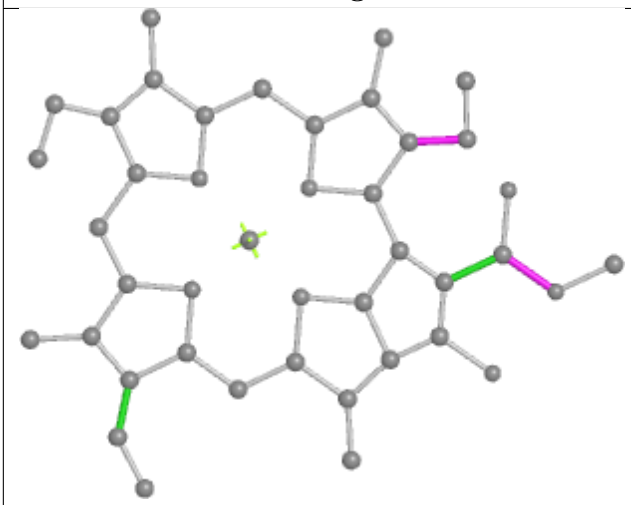


Bond angles



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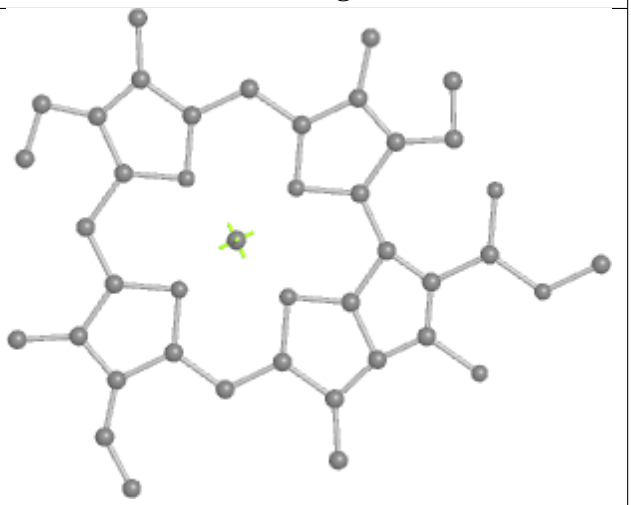
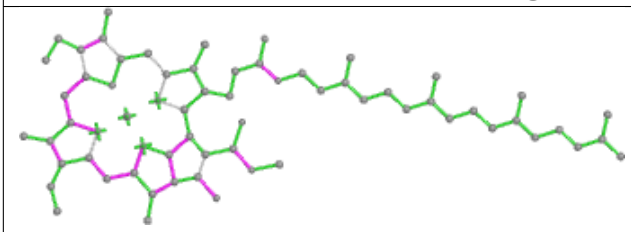
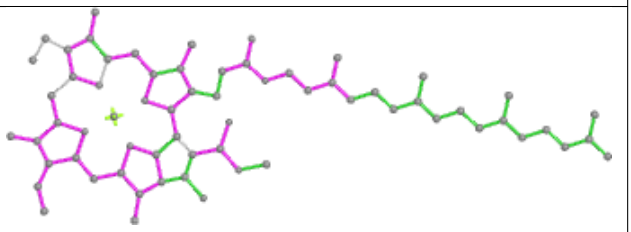


Rings

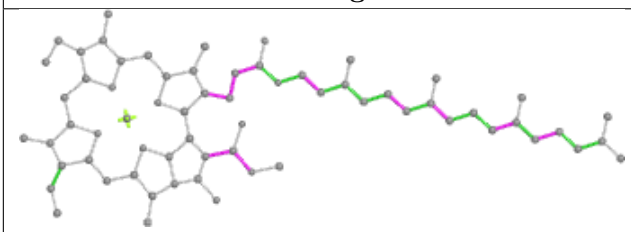
Ligand CLA B 815



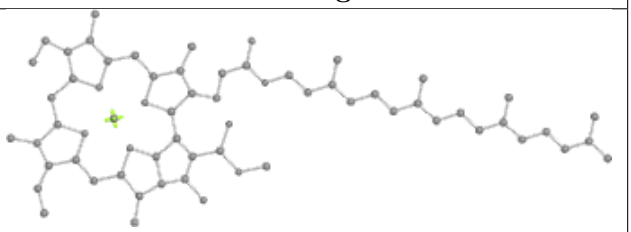
Bond lengths



Bond angles

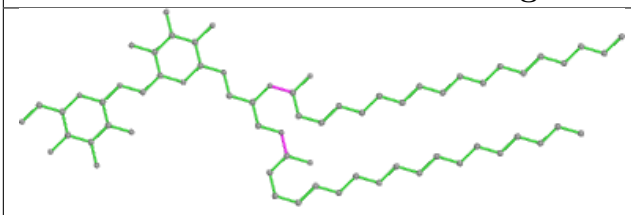


Torsions

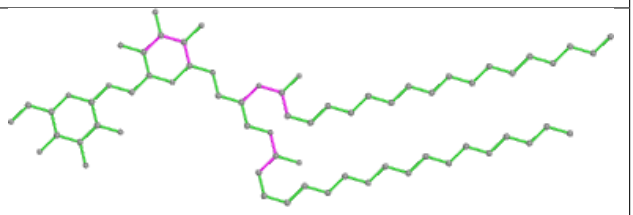


Rings

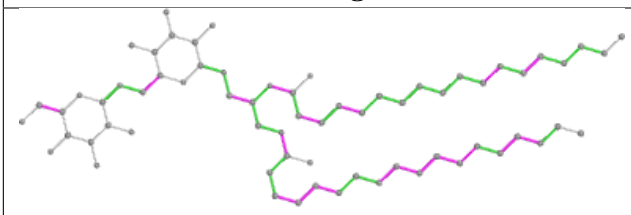
Ligand DGD B 845



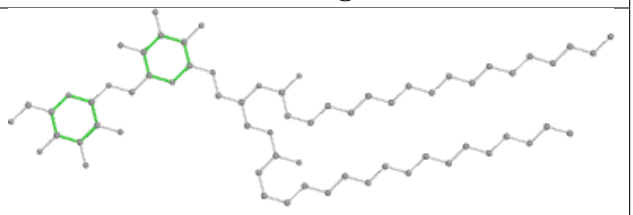
Bond lengths



Bond angles

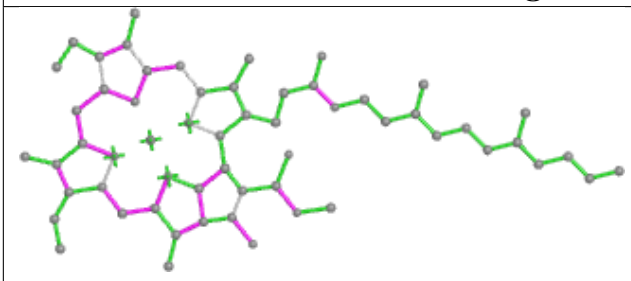


Torsions

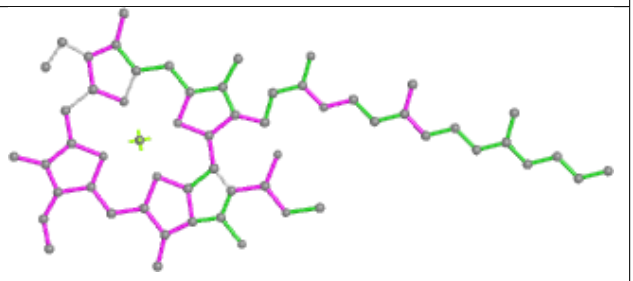


Rings

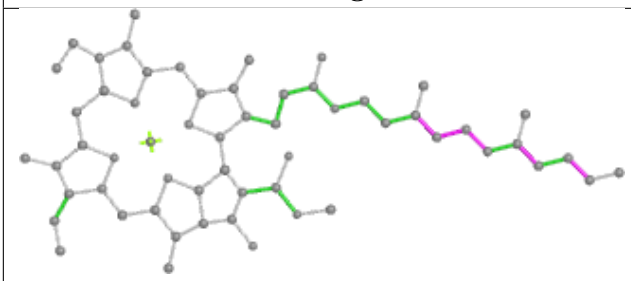
Ligand CLA B 849



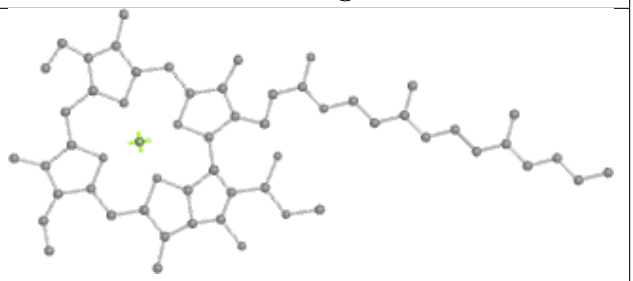
Bond lengths



Bond angles

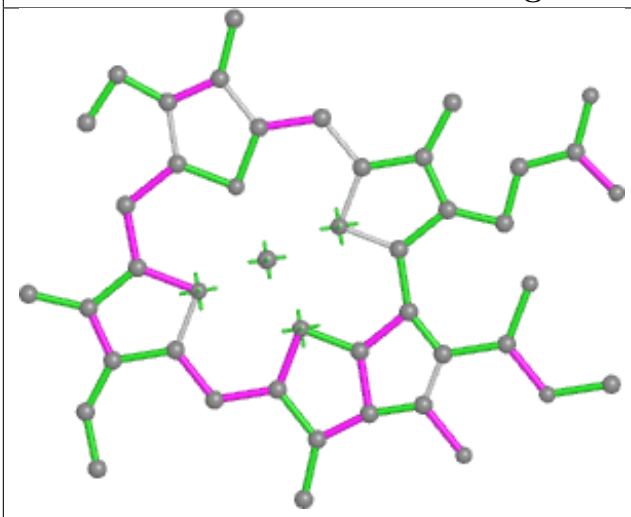


Torsions

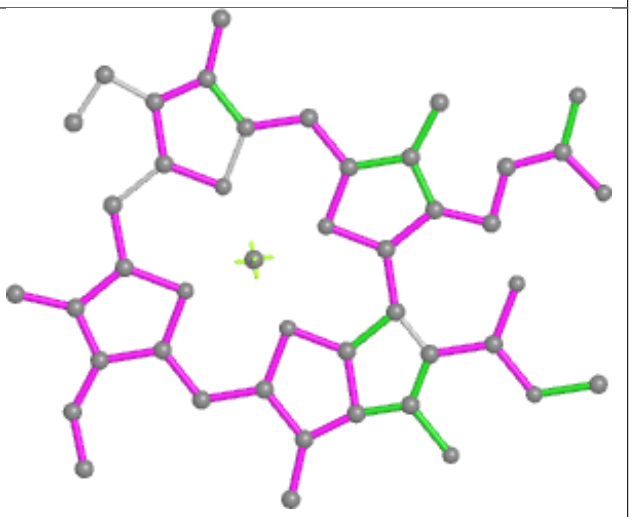


Rings

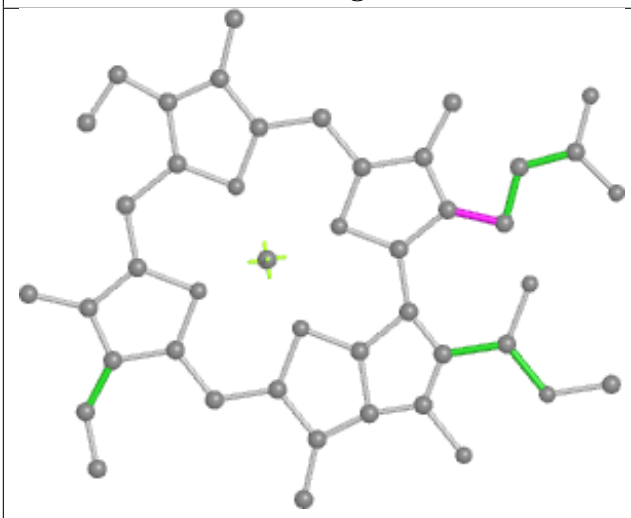
Ligand CLA B 820



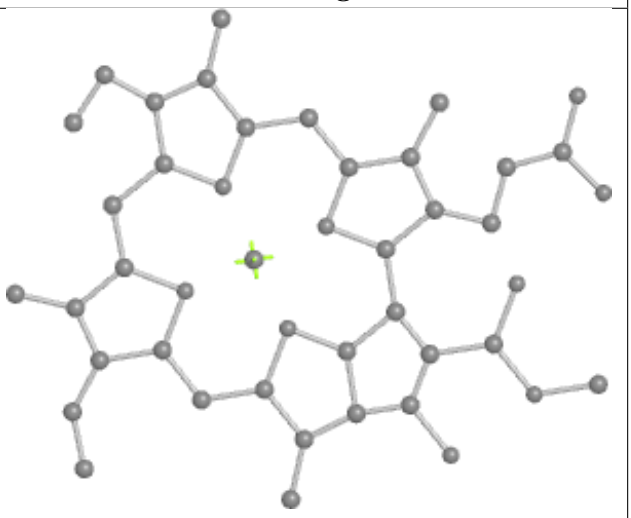
Bond lengths



Bond angles

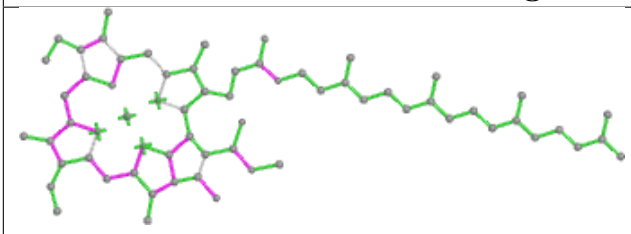


Torsions

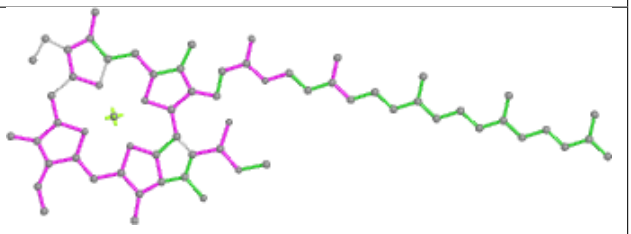


Rings

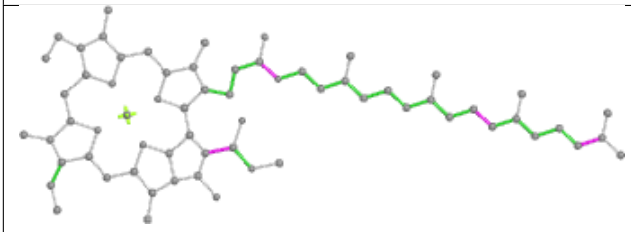
Ligand CLA A 809



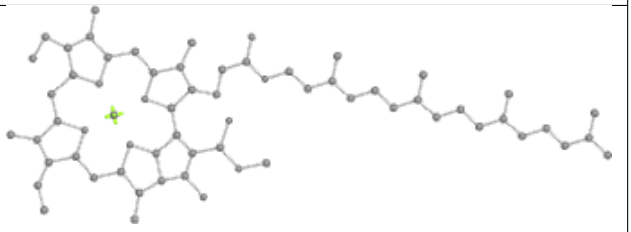
Bond lengths



Bond angles

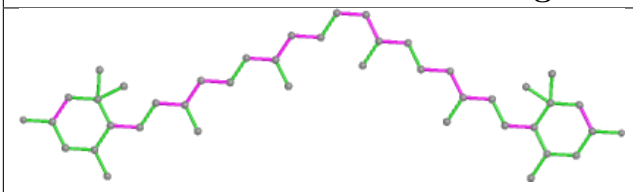


Torsions

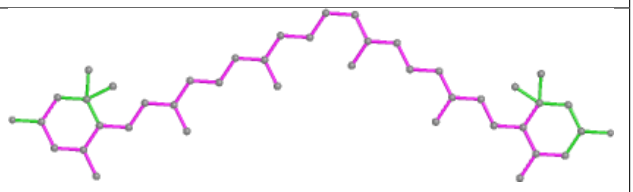


Rings

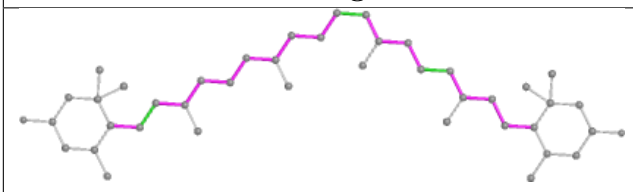
Ligand 5X6 7 315



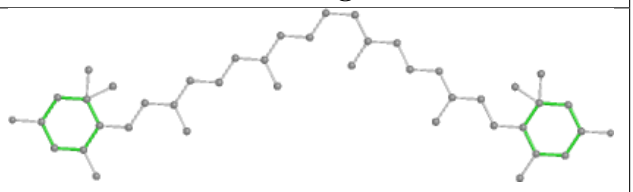
Bond lengths



Bond angles

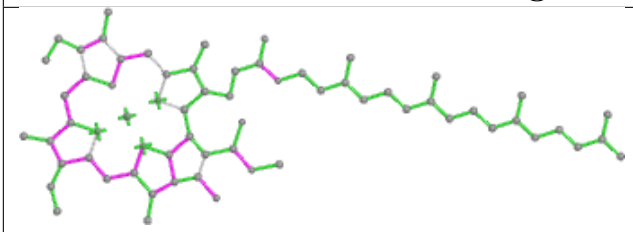


Torsions

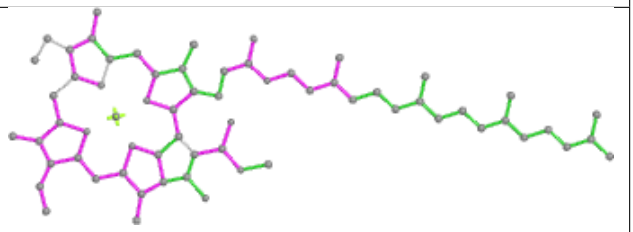


Rings

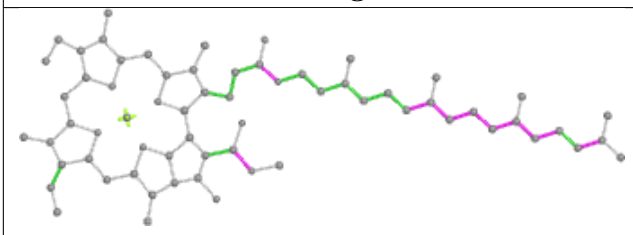
Ligand CLA 4 304



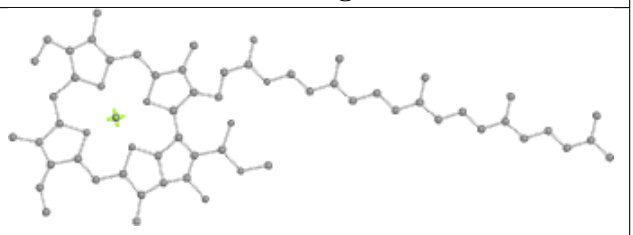
Bond lengths



Bond angles

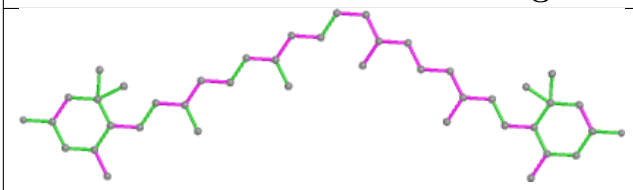


Torsions

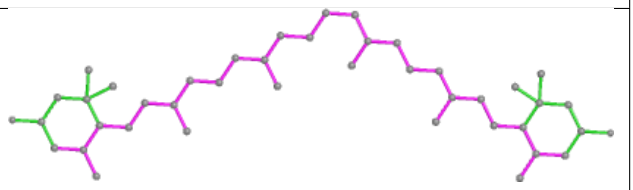


Rings

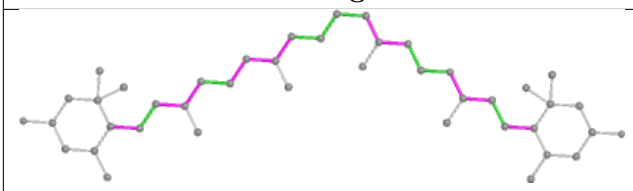
Ligand 5X6 Z 206



Bond lengths



Bond angles



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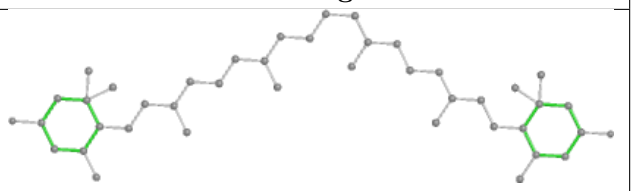
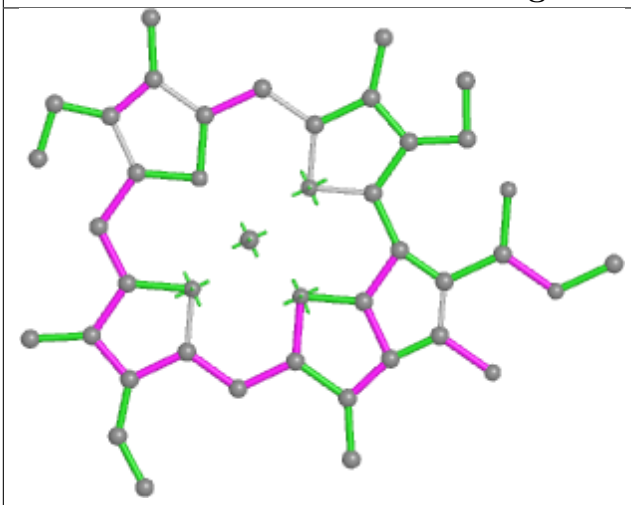


Rings

Ligand CLA 1 308



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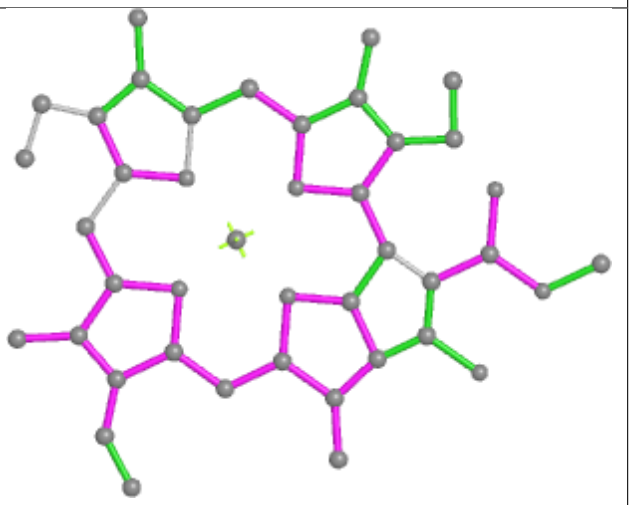
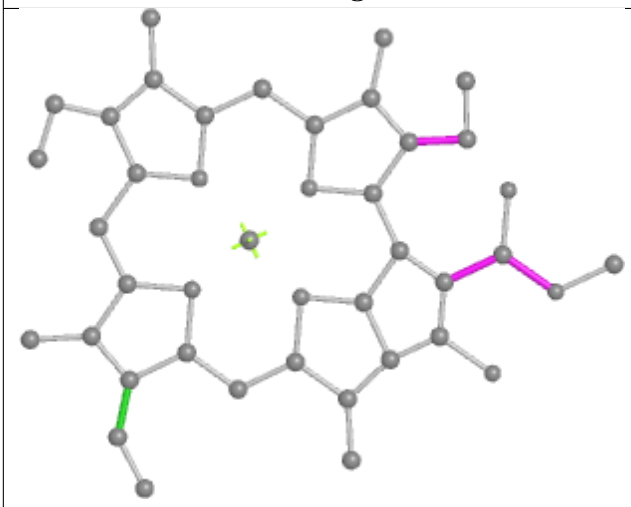


Bond angles



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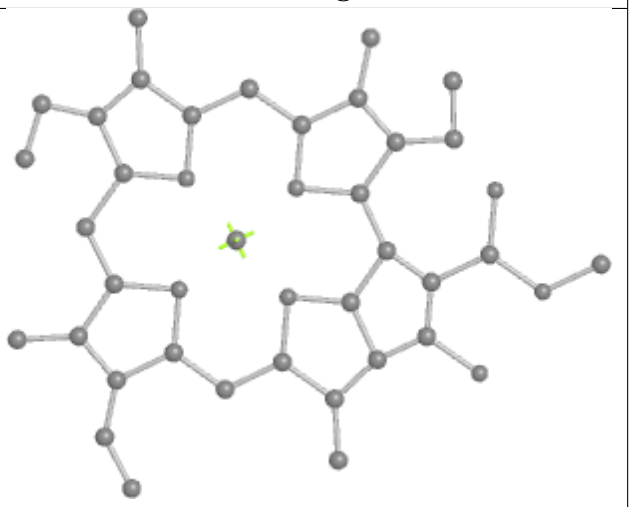
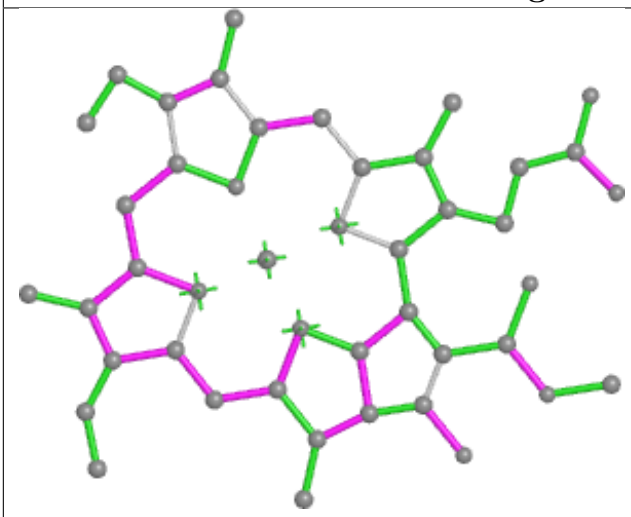
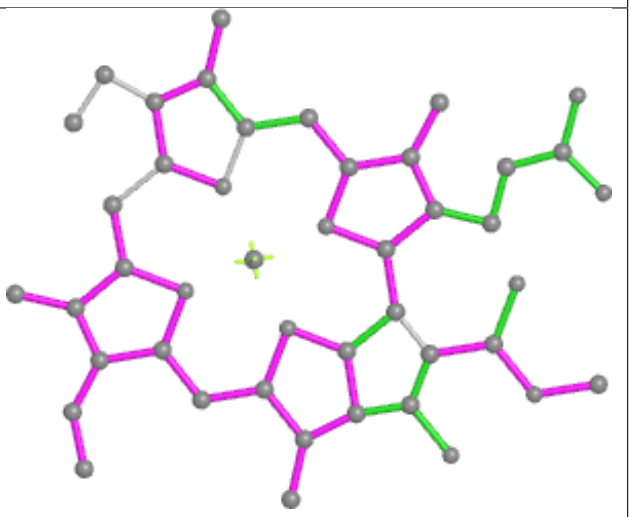


Rings

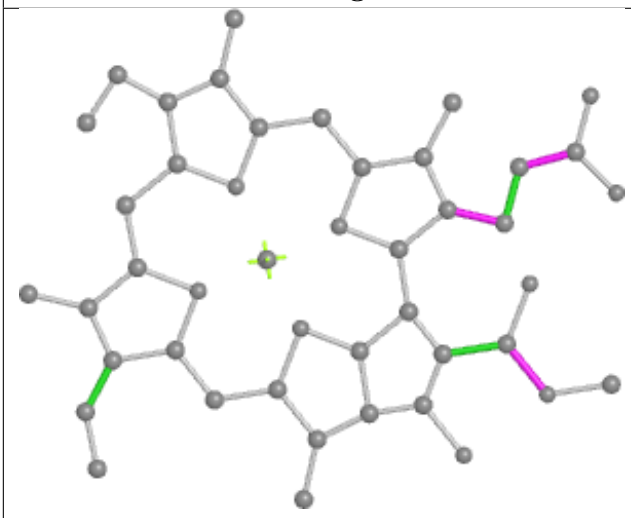
Ligand CLA 1 306



Bond lengths



Bond angles



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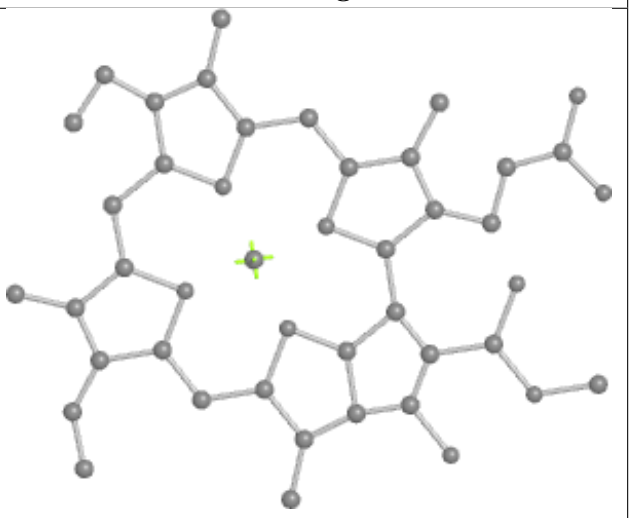
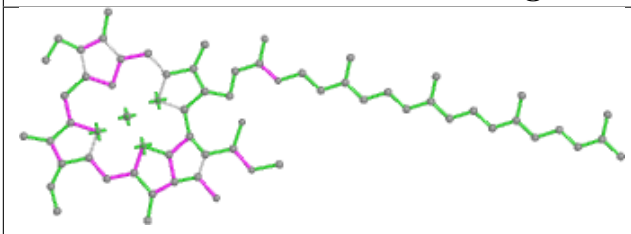
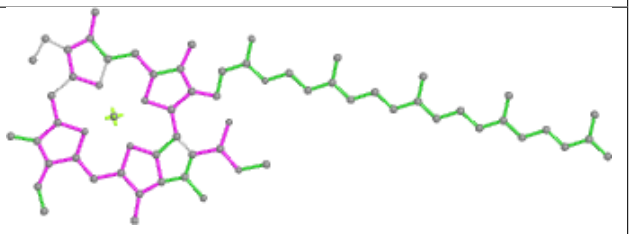


Rings

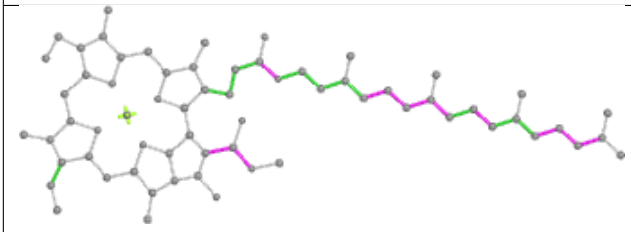
Ligand CLA B 811



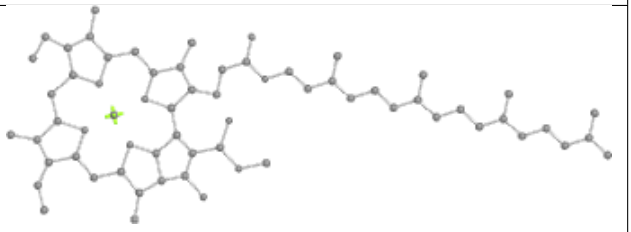
Bond lengths



Bond angles

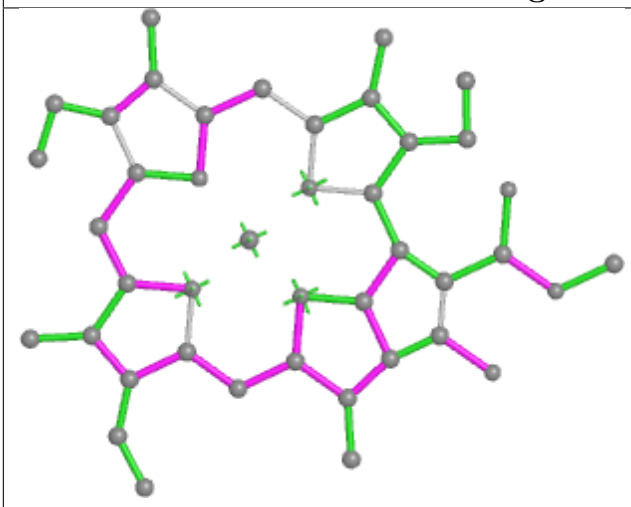


Torsions

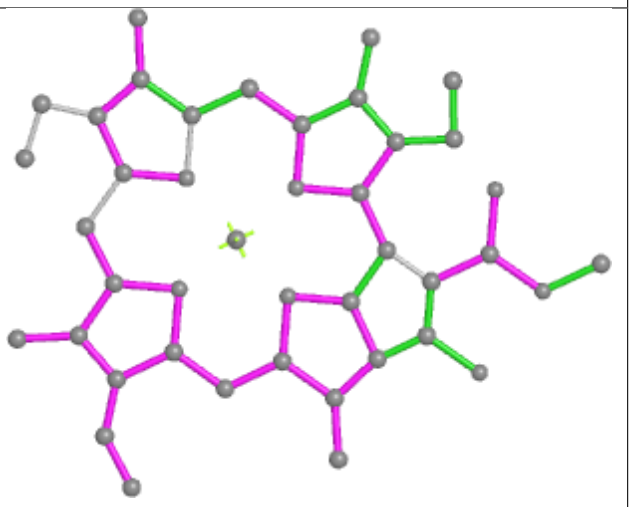


Rings

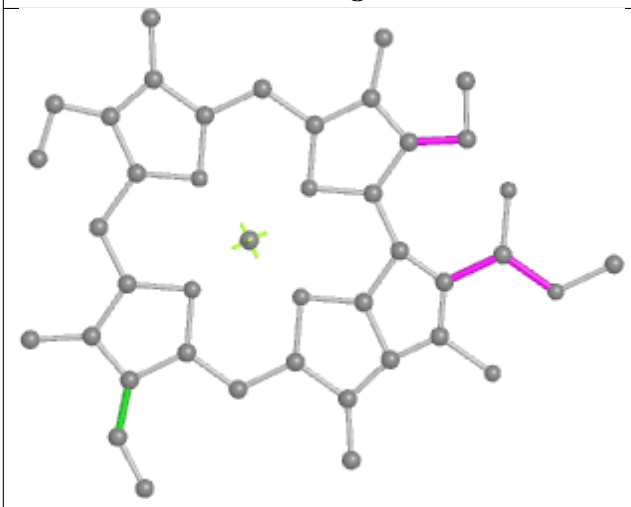
Ligand CLA 6 312



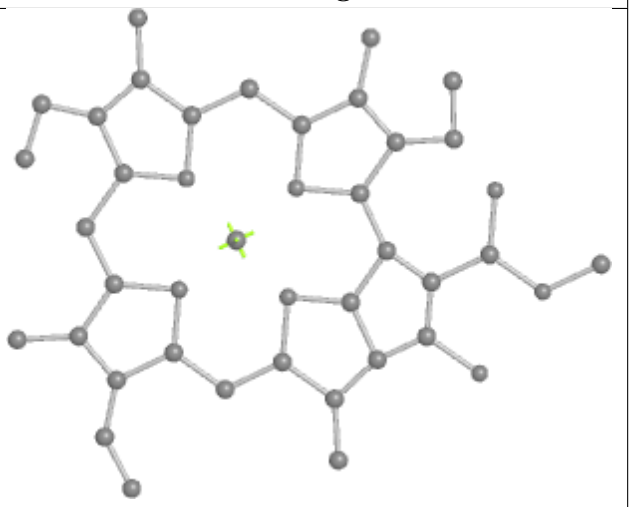
Bond lengths



Bond angles

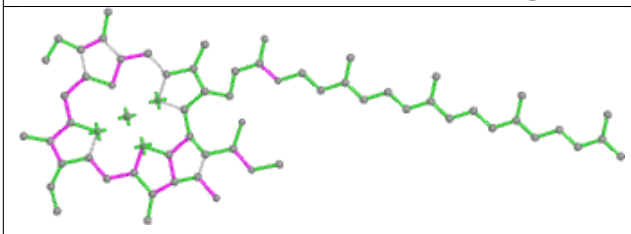


Torsions

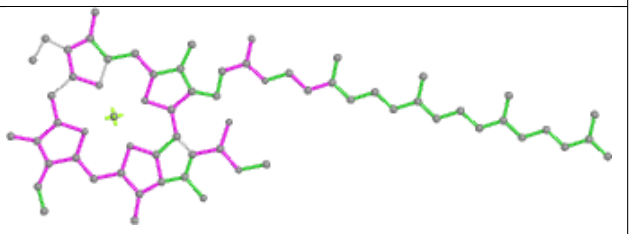


Rings

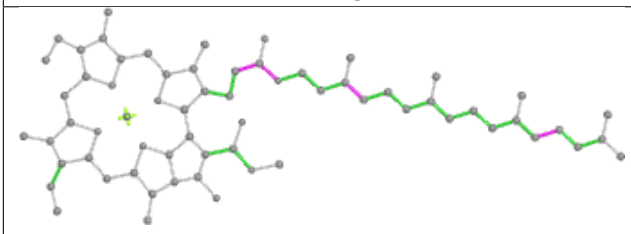
Ligand CLA A 825



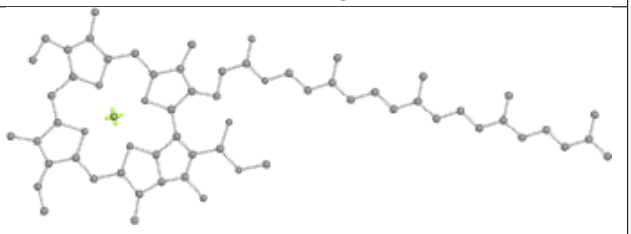
Bond lengths



Bond angles

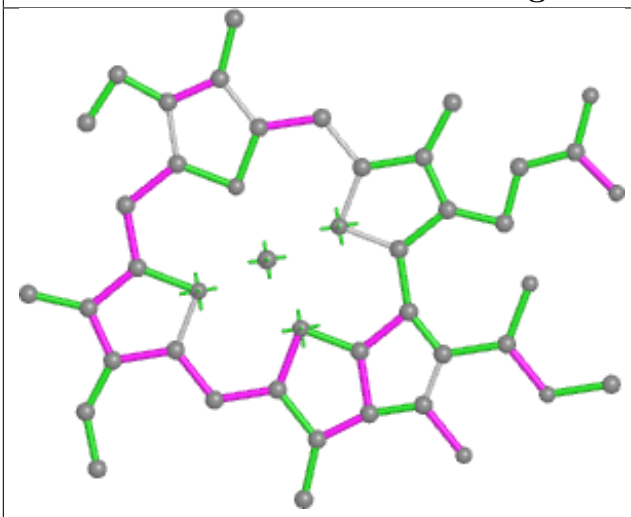


Torsions



Rings

Ligand CLA 6 308



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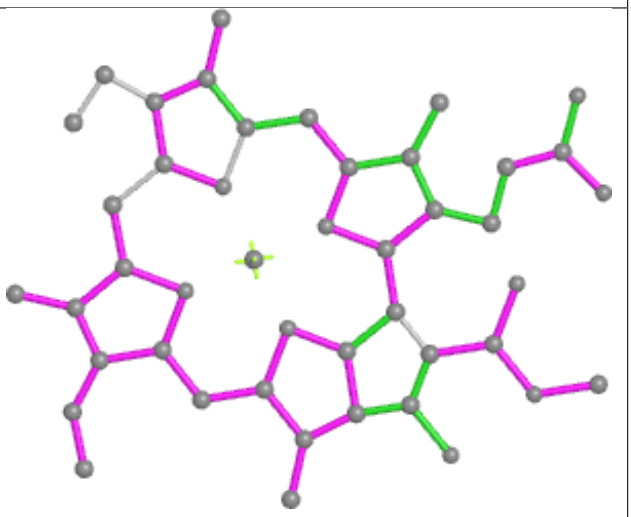
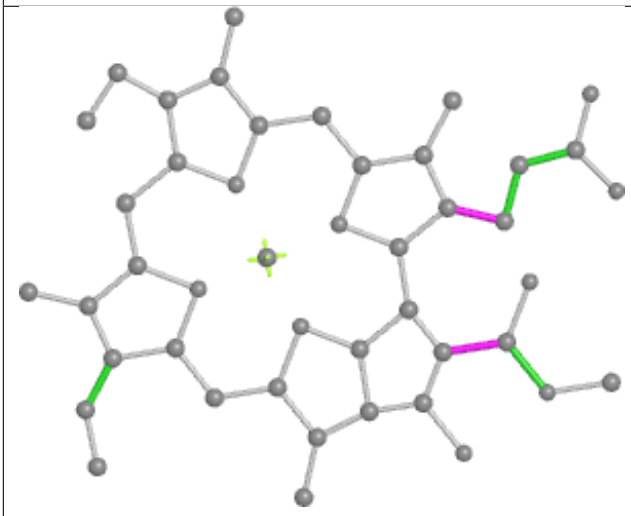
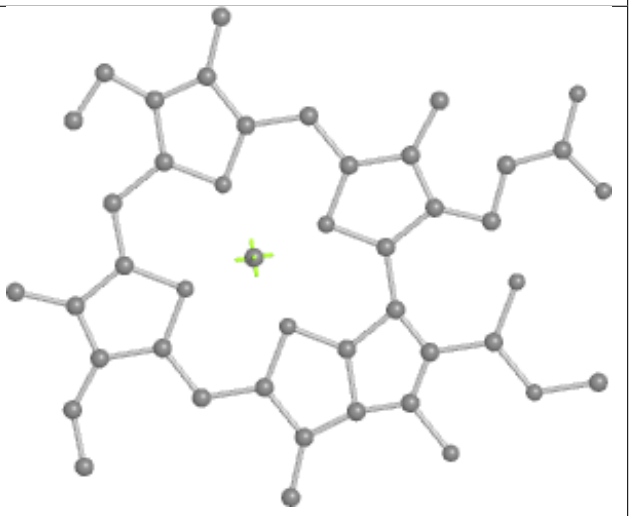


Bond angles

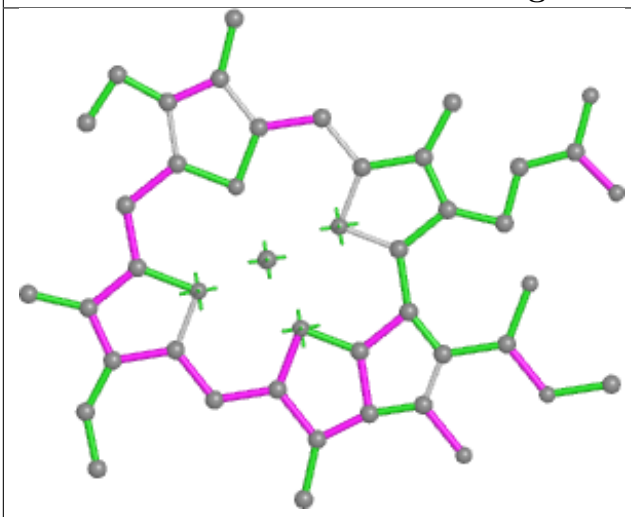


Torsions

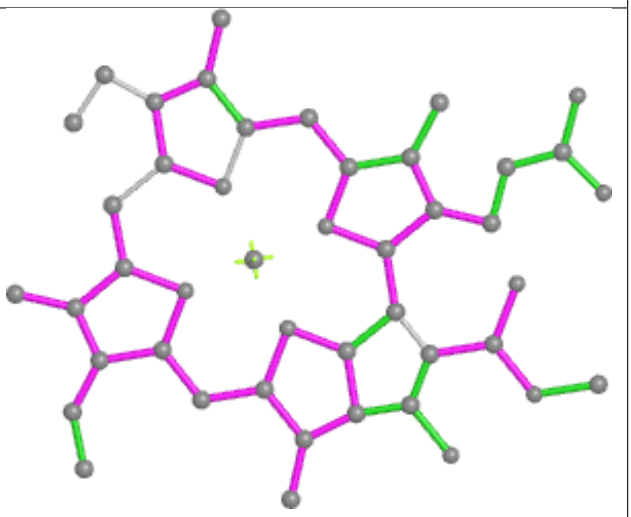


Rings

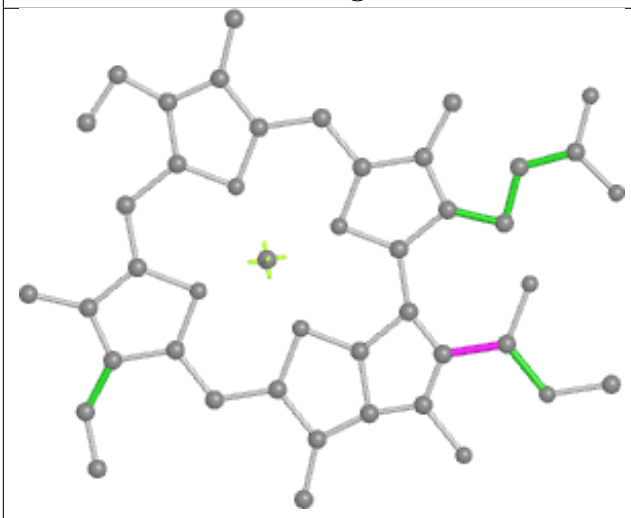
Ligand CLA 2 307



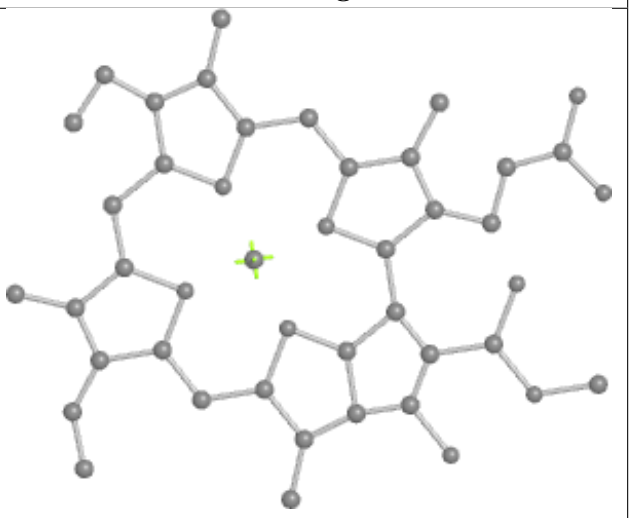
Bond lengths



Bond angles

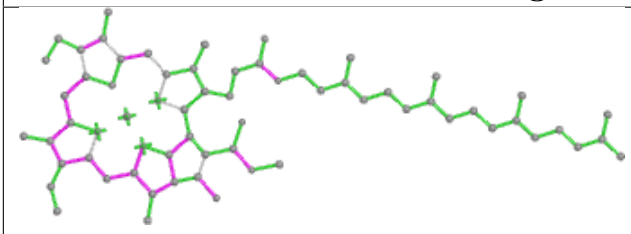


Torsions

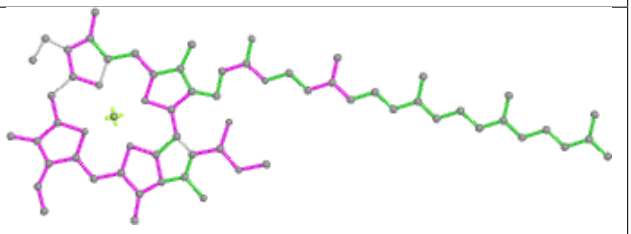


Rings

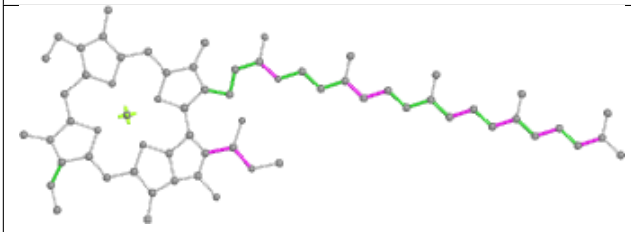
Ligand CLA 2 304



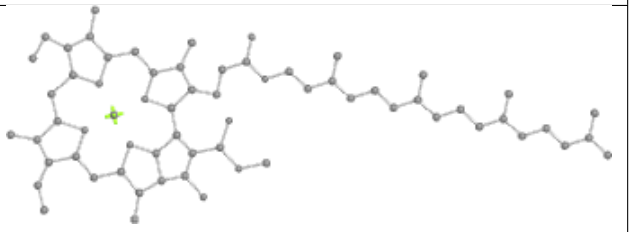
Bond lengths



Bond angles

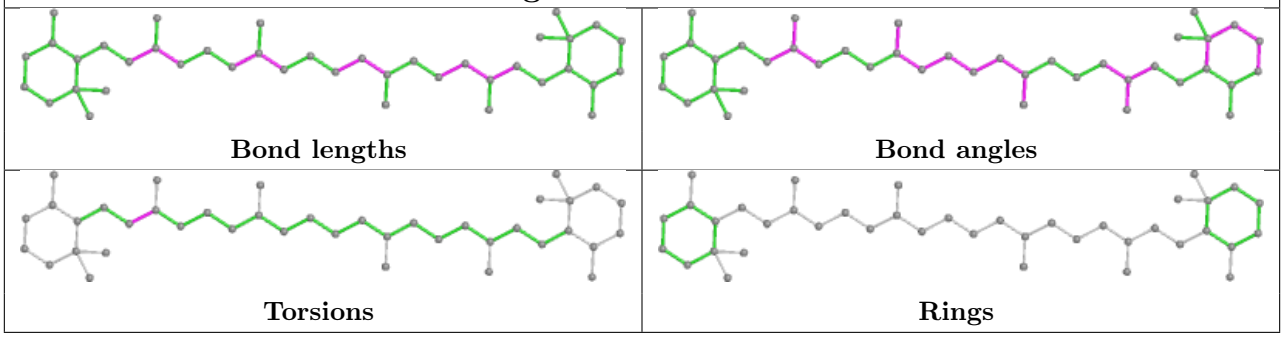


Torsions

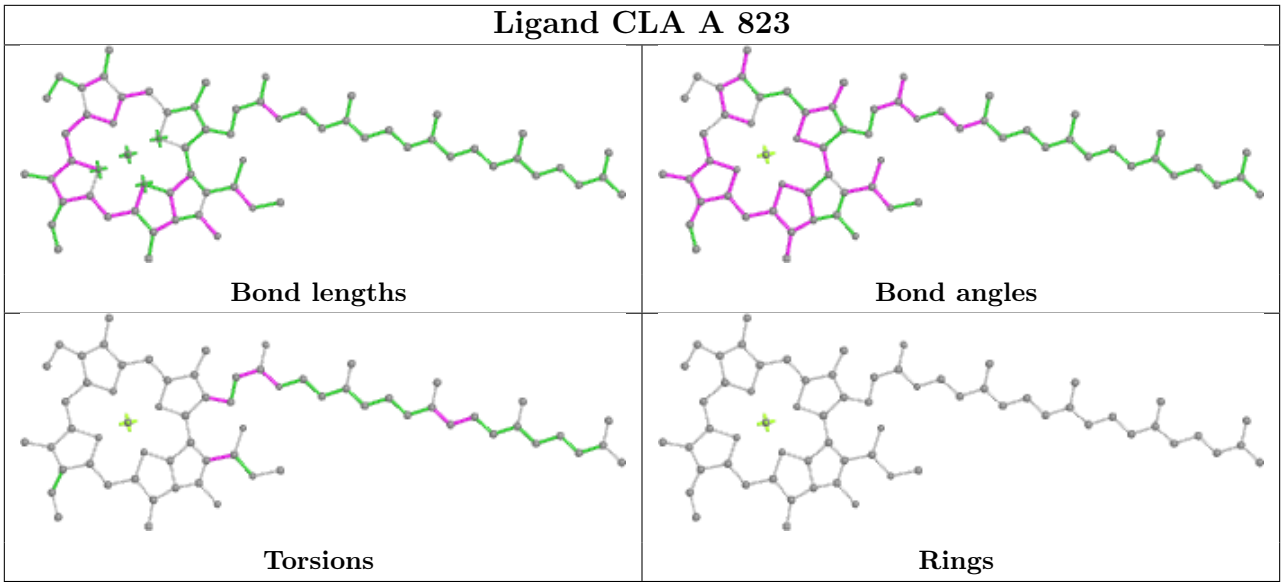


Rings

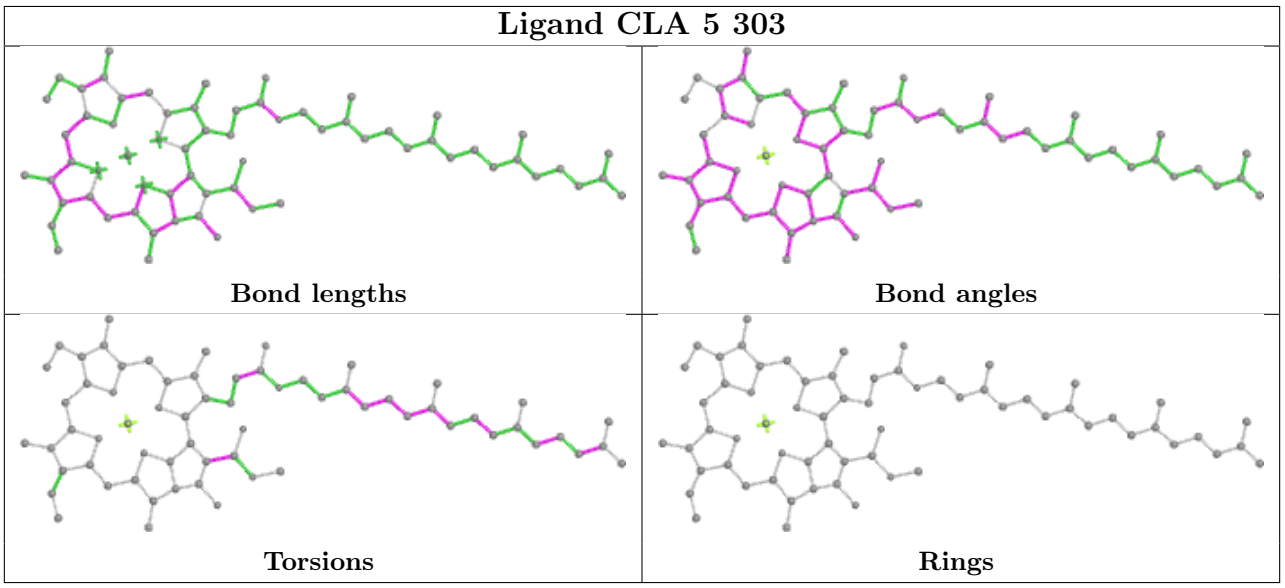
Ligand BCR A 862



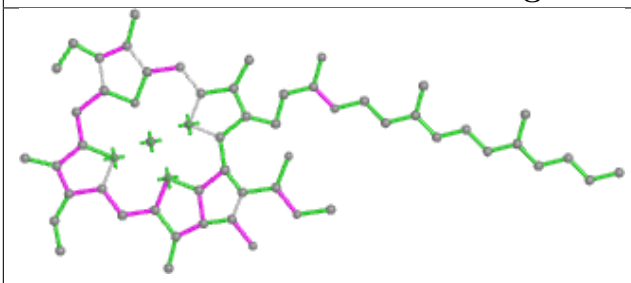
Ligand CLA A 823



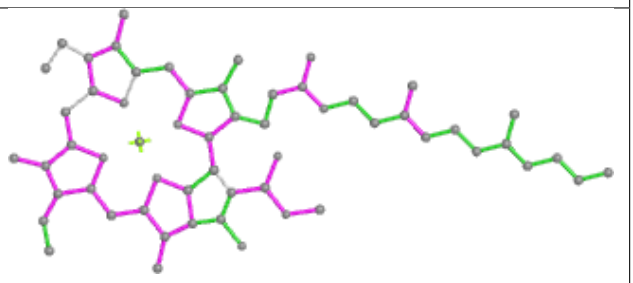
Ligand CLA 5 303



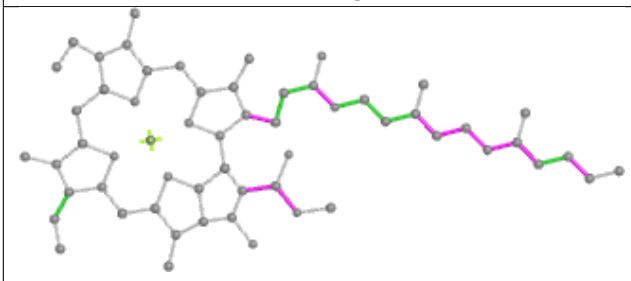
Ligand CLA O 206



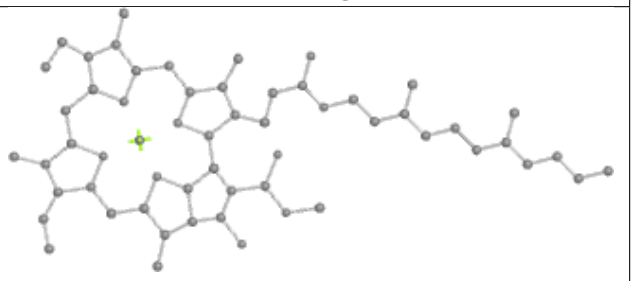
Bond lengths



Bond angles

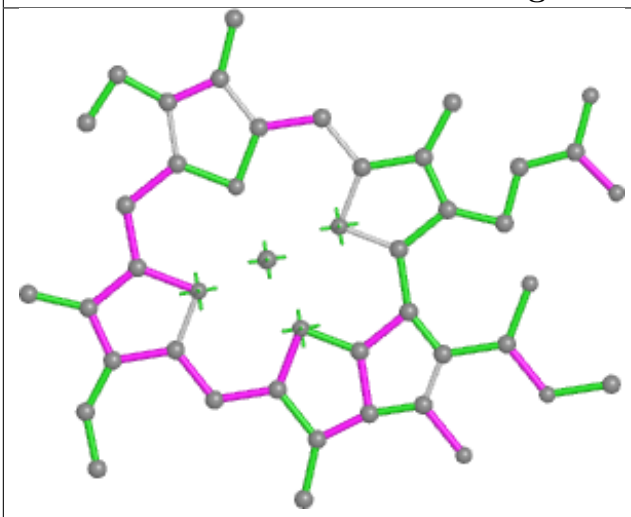


Torsions

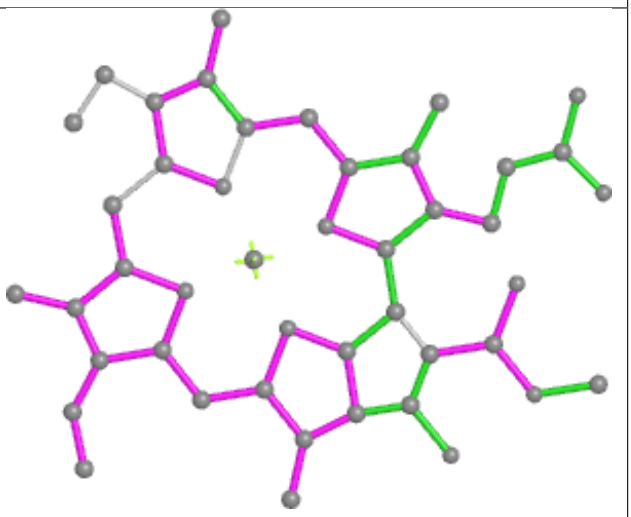


Rings

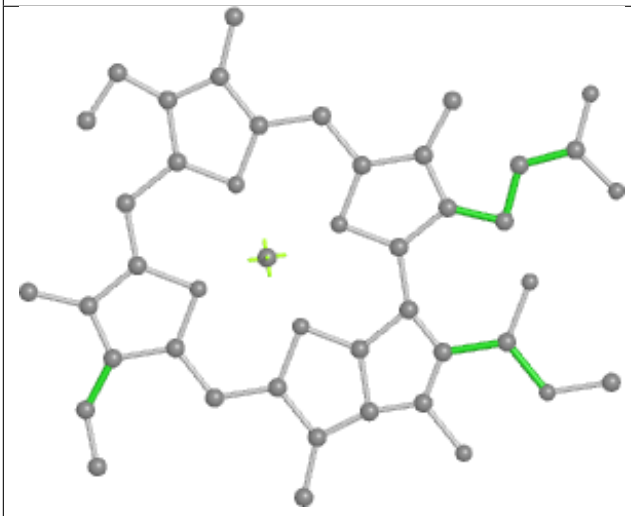
Ligand CLA 4 307



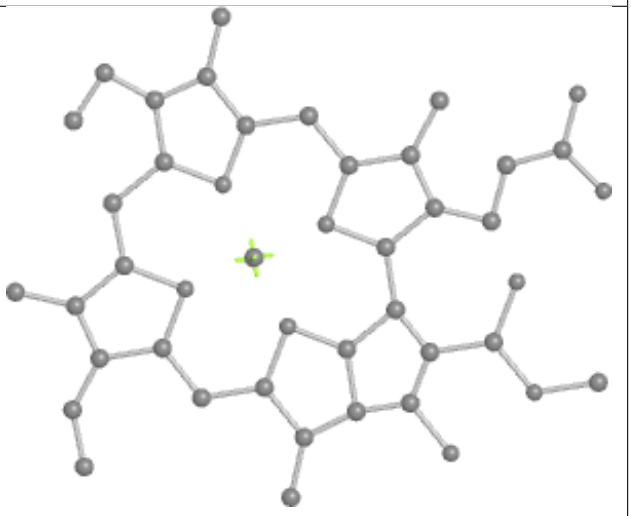
Bond lengths



Bond angles

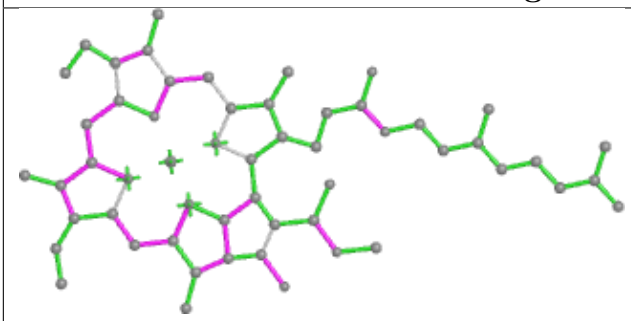


Torsions

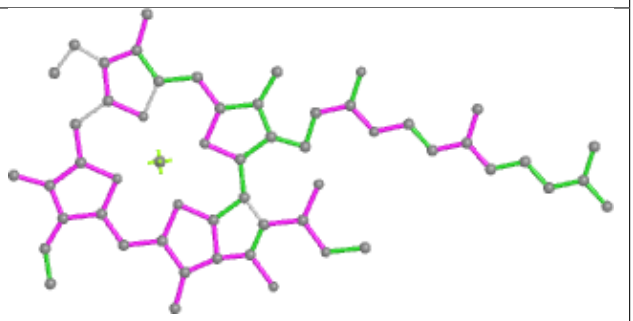


Rings

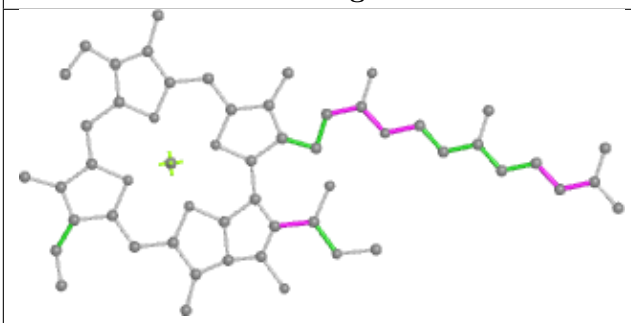
Ligand CLA B 812



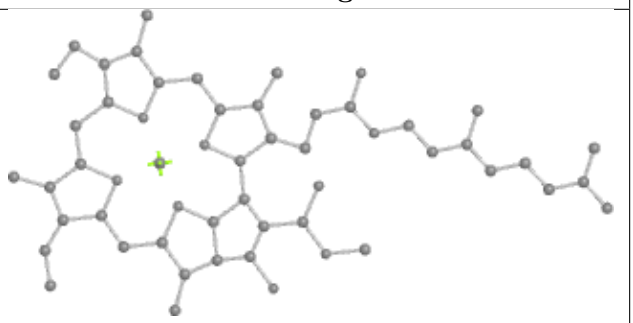
Bond lengths



Bond angles

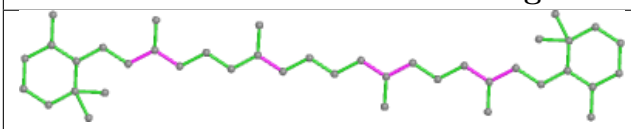


Torsions

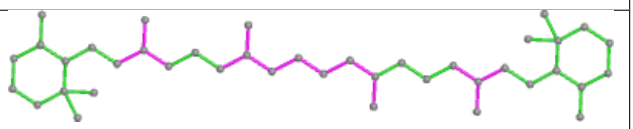


Rings

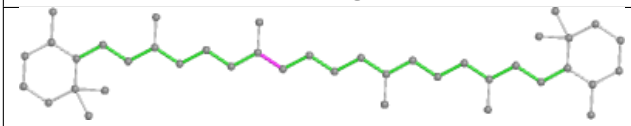
Ligand BCR F 207



Bond lengths



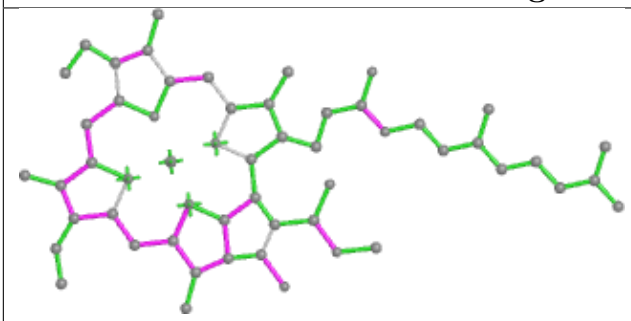
Bond angles



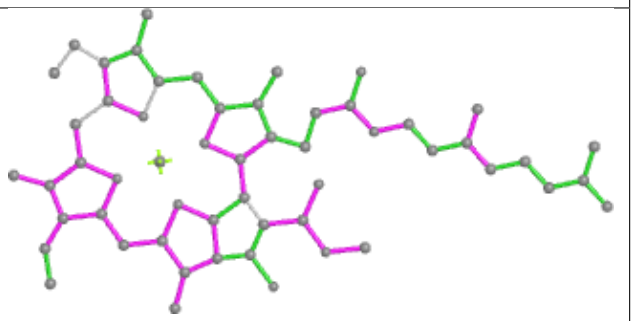
Torsions

Rings

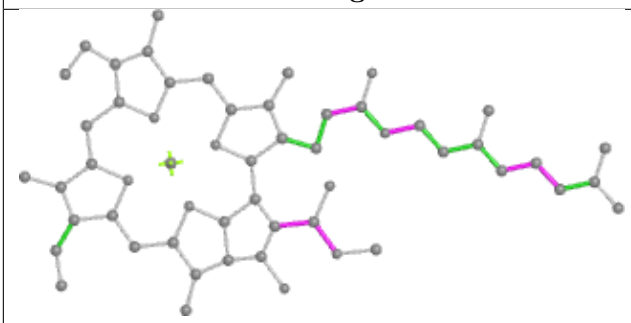
Ligand CLA 2 308



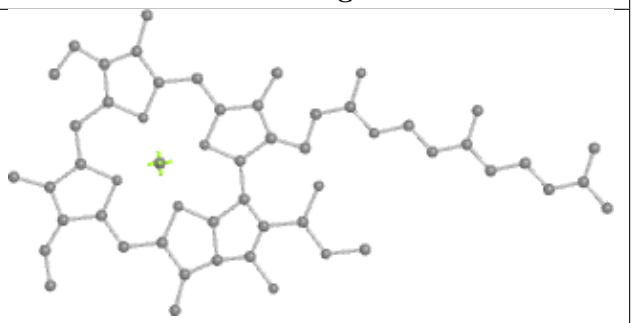
Bond lengths



Bond angles

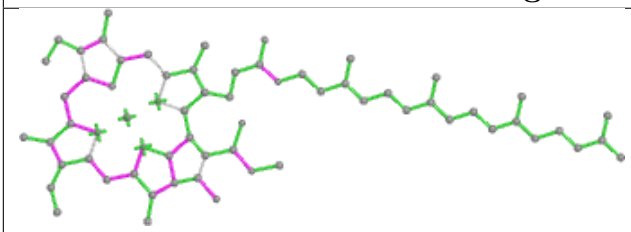


Torsions

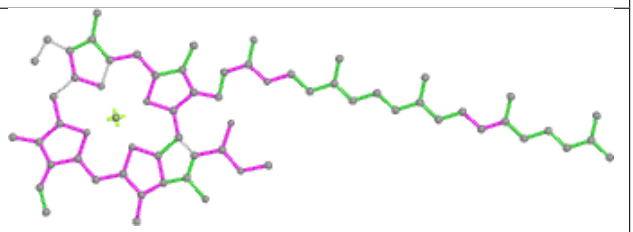


Rings

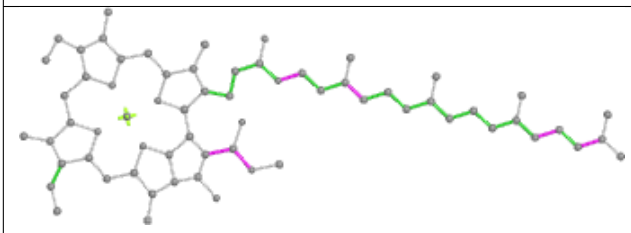
Ligand CLA A 832



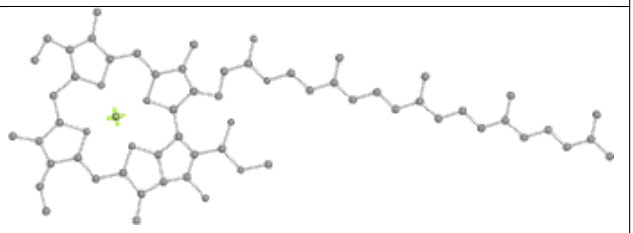
Bond lengths



Bond angles

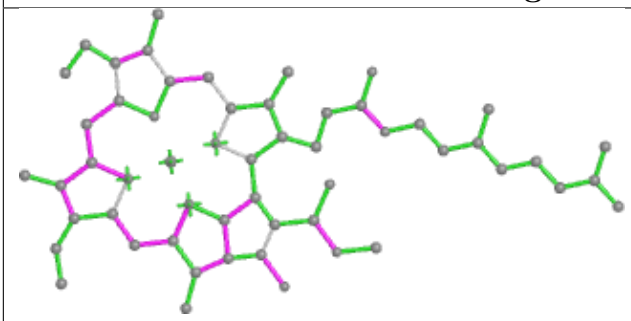


Torsions

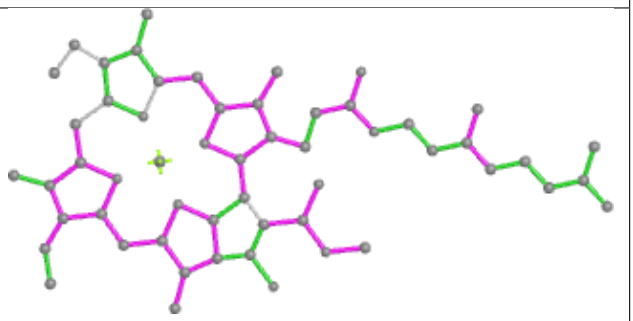


Rings

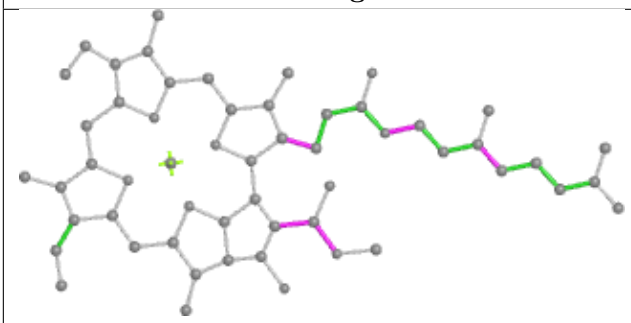
Ligand CLA B 823



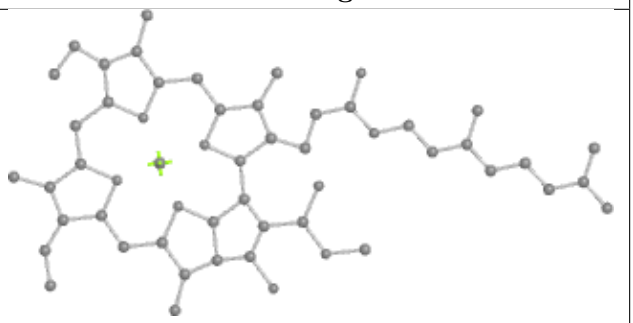
Bond lengths



Bond angles

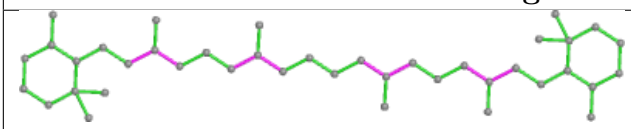


Torsions

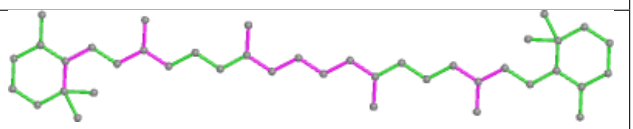


Rings

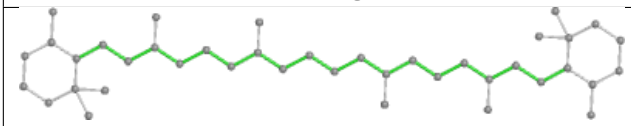
Ligand BCR B 841



Bond lengths



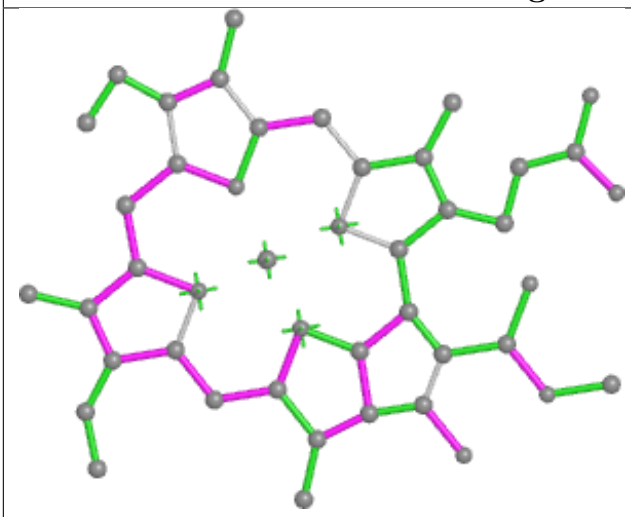
Bond angles



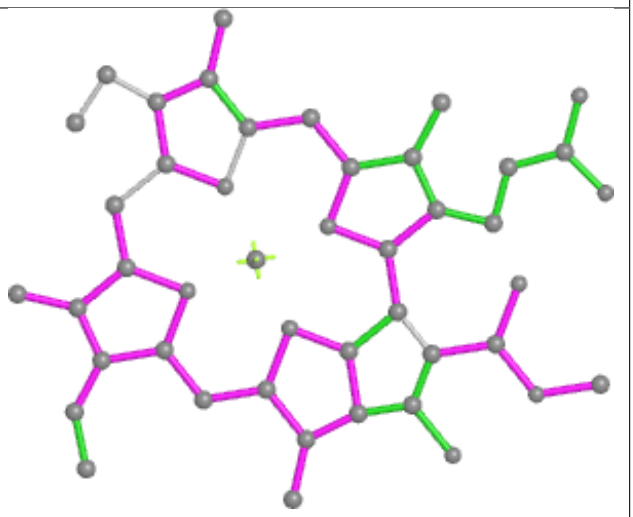
Torsions

Rings

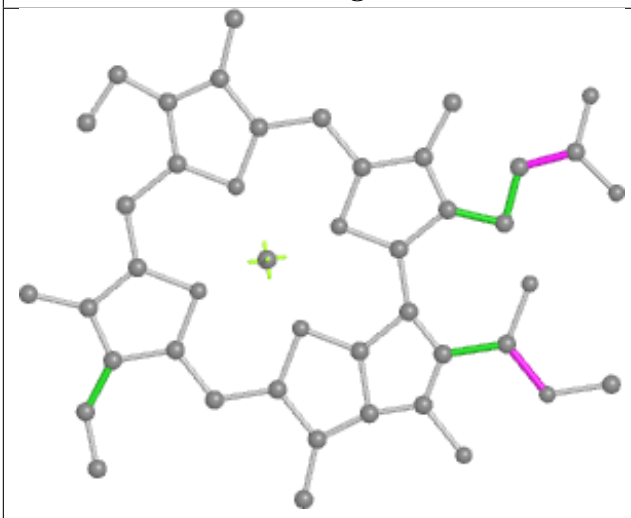
Ligand CLA 1 304



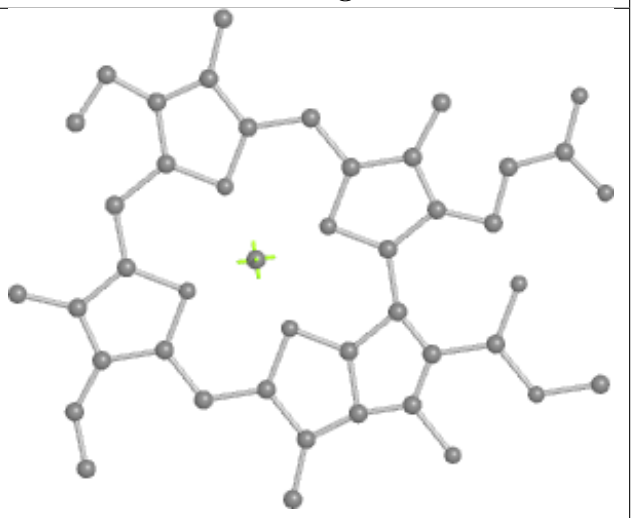
Bond lengths



Bond angles

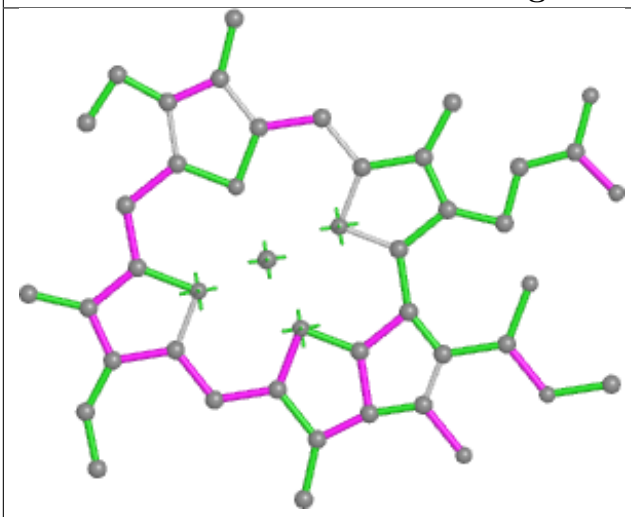


Torsions

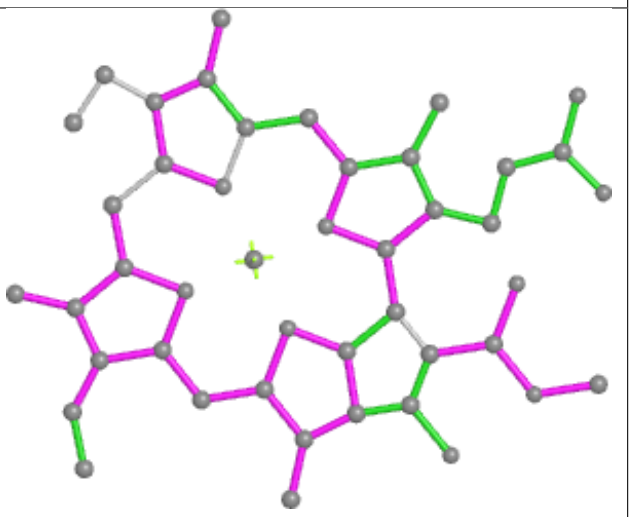


Rings

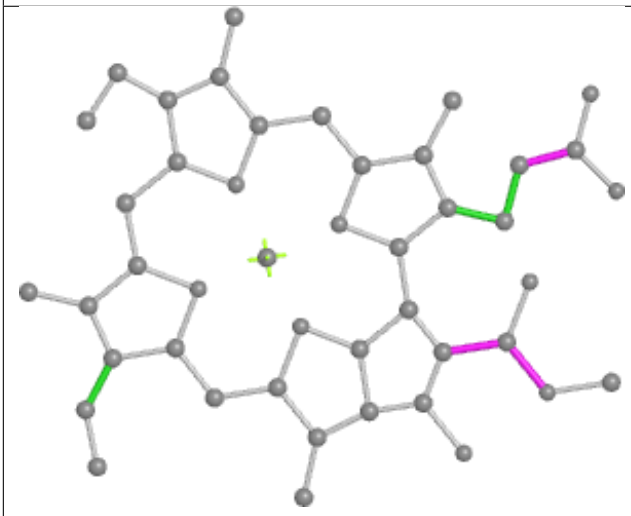
Ligand CLA 7 313



Bond lengths



Bond angles



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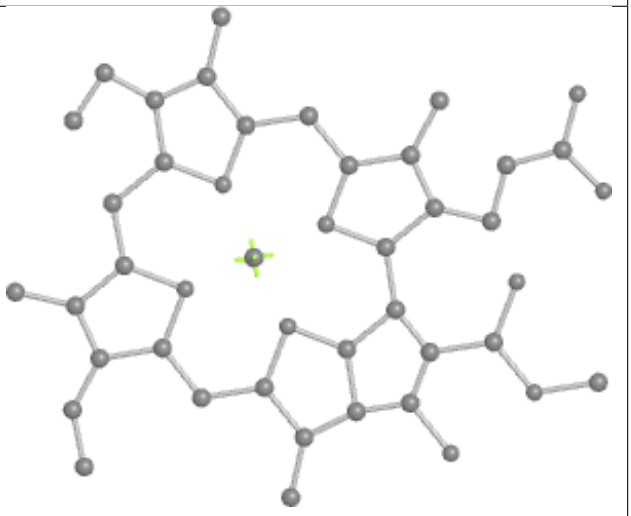
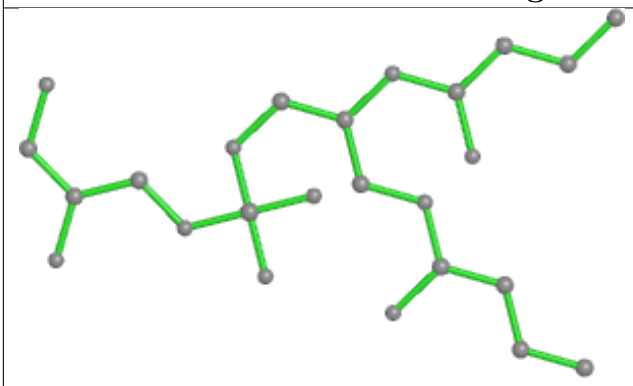
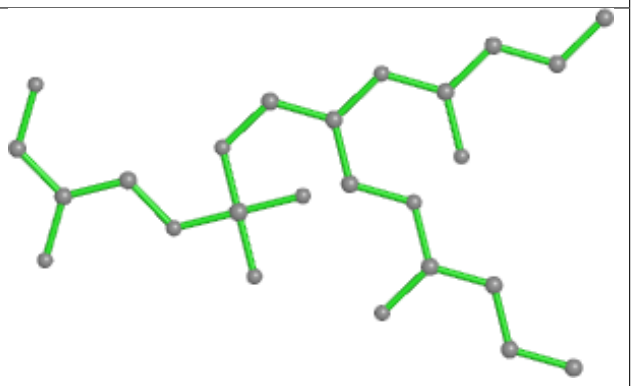


Rings

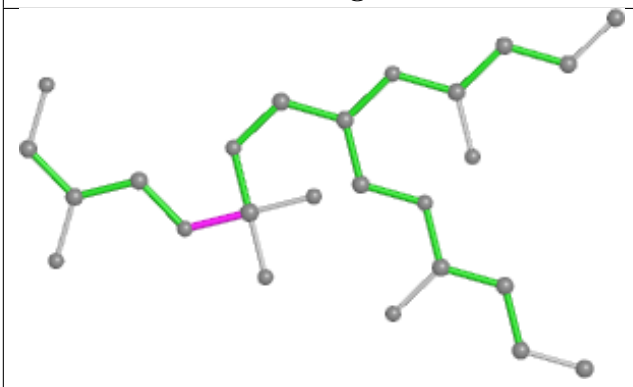
Ligand LHG 5 316



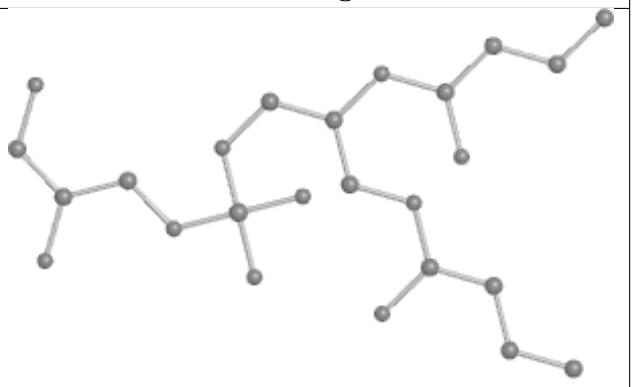
Bond lengths



Bond angles

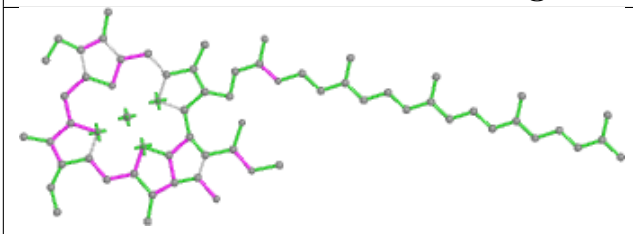


Torsions

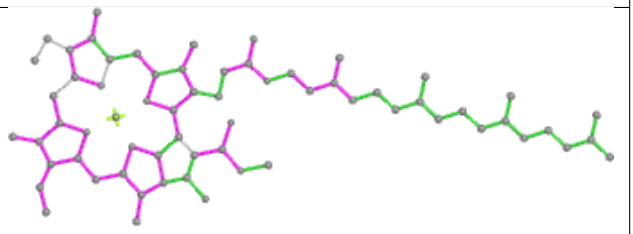


Rings

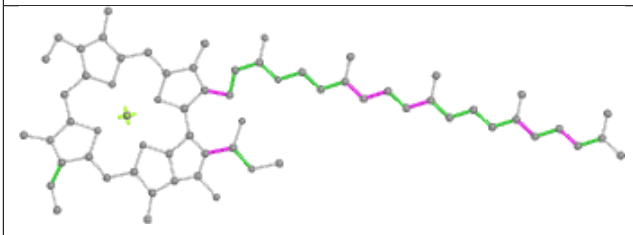
Ligand CLA 5 302



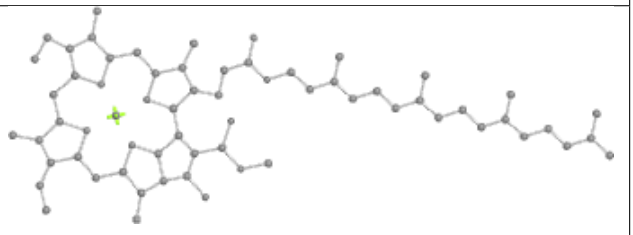
Bond lengths



Bond angles

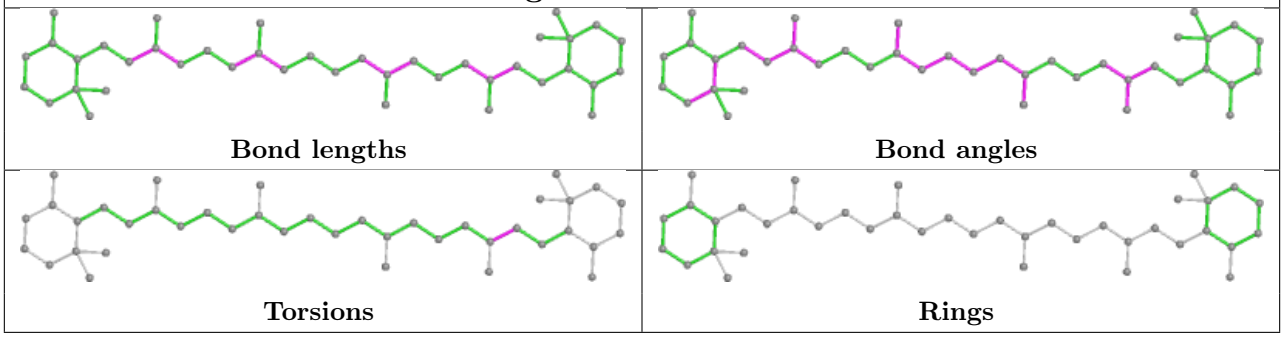


Torsions

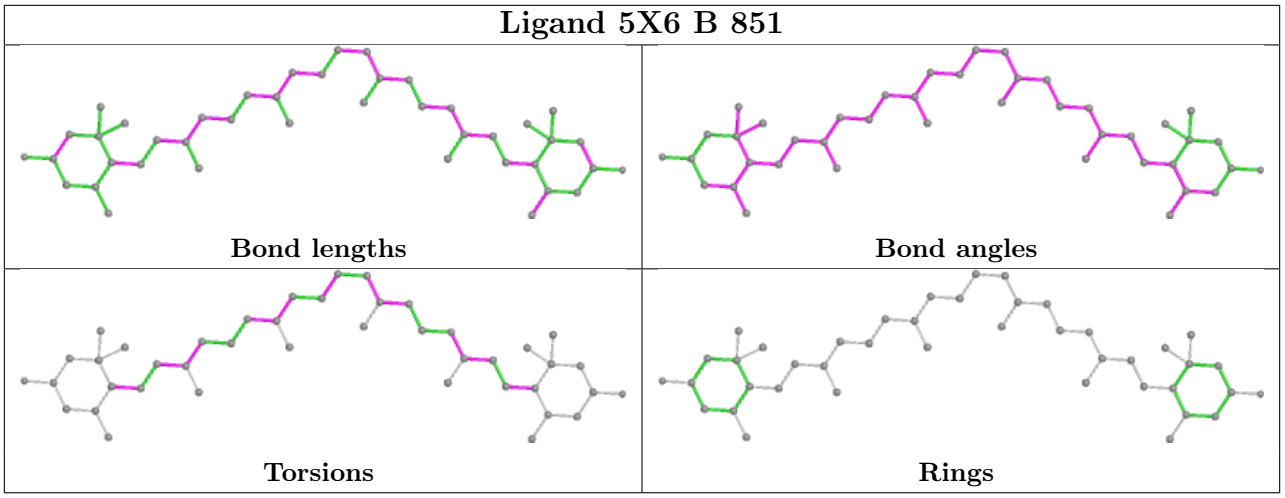


Rings

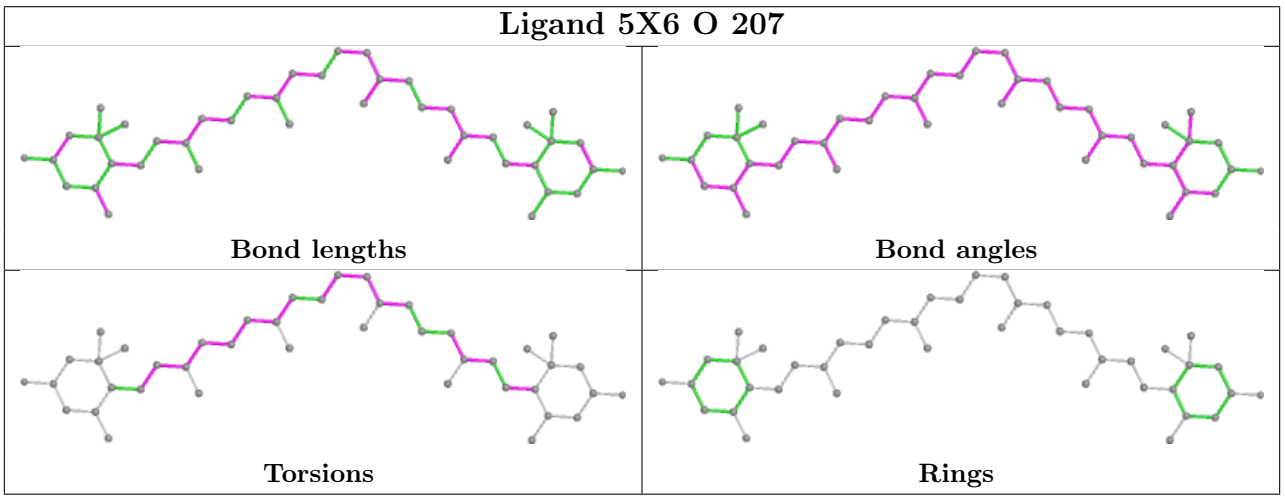
Ligand BCR Z 202

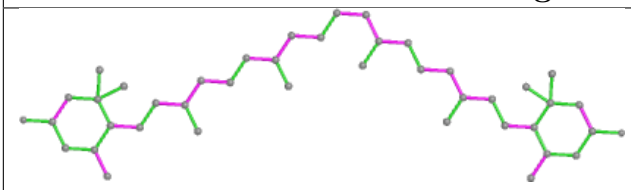
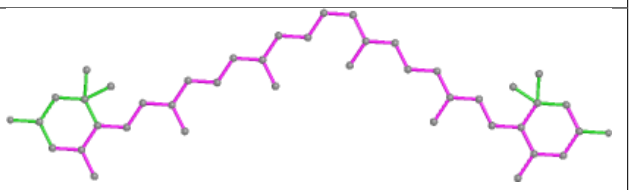
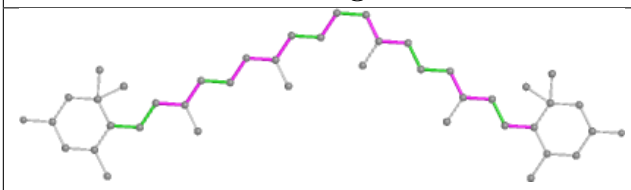
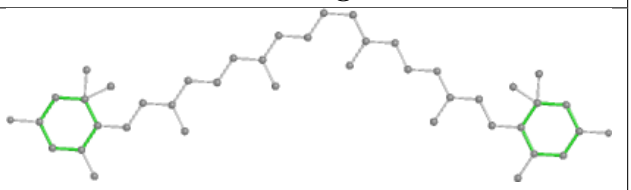


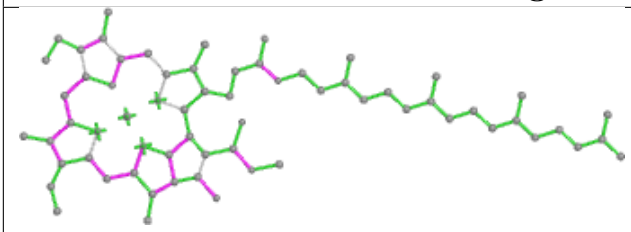
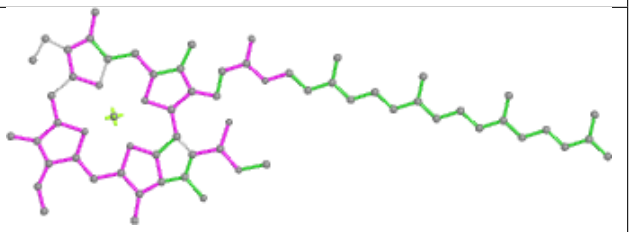
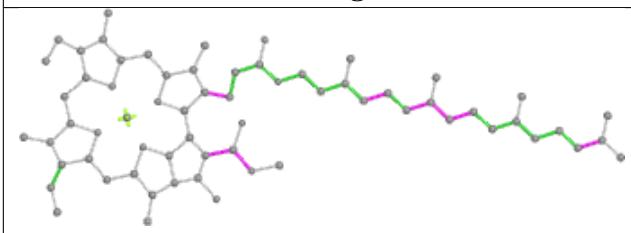
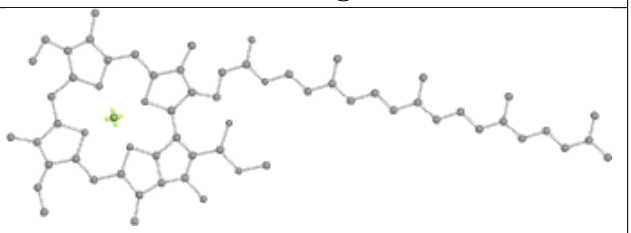
Ligand 5X6 B 851



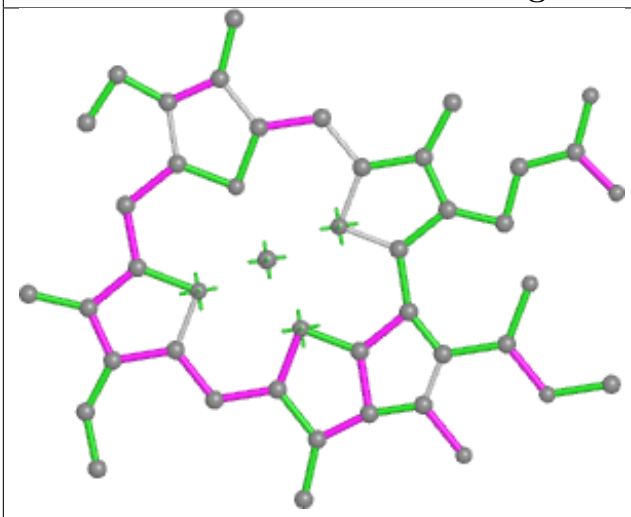
Ligand 5X6 O 207



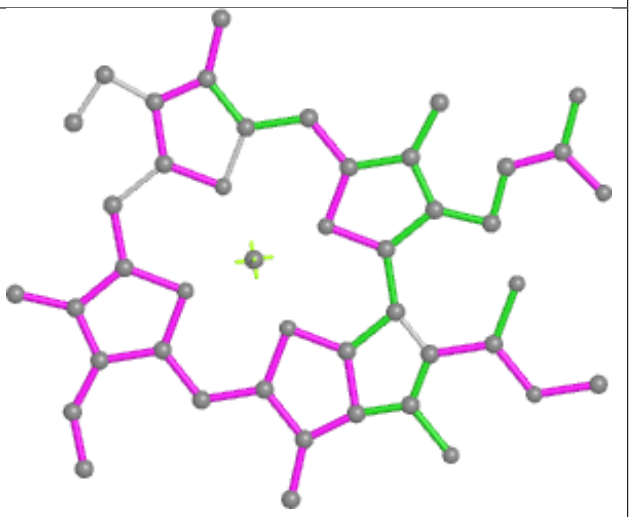
Ligand 5X6 4 314	
	
Bond lengths	Bond angles
	
Torsions	Rings

Ligand CLA 4 303	
	
Bond lengths	Bond angles
	
Torsions	Rings

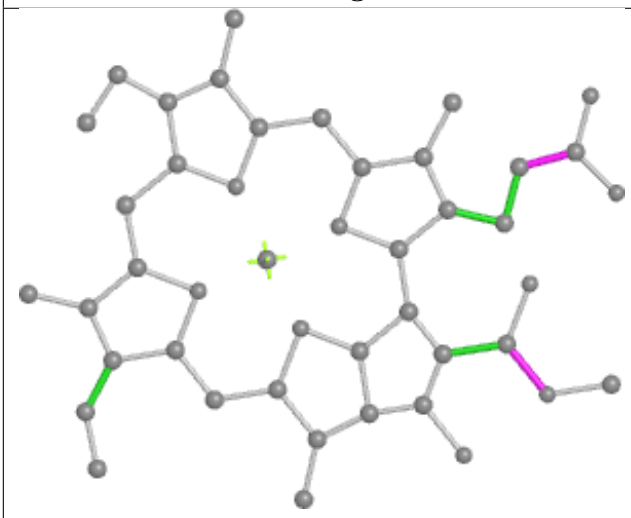
Ligand CLA 7 305



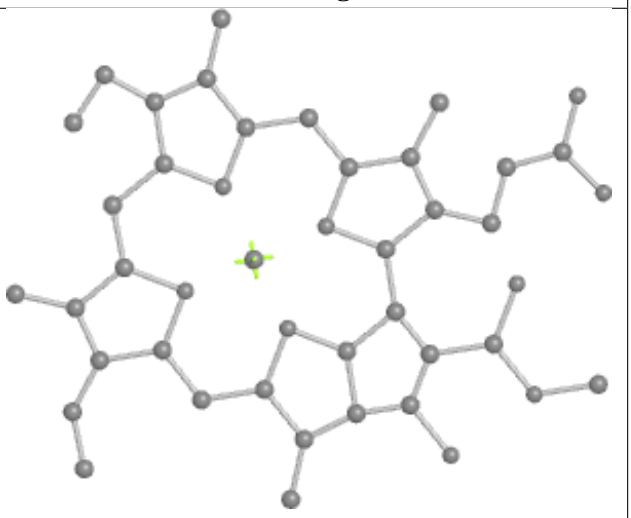
Bond lengths



Bond angles

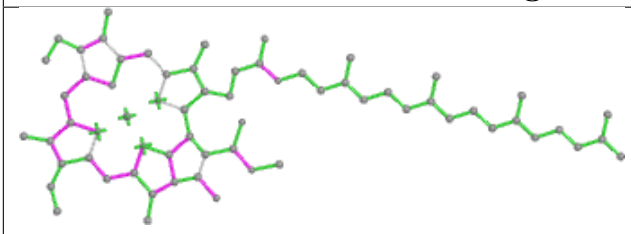


Torsions

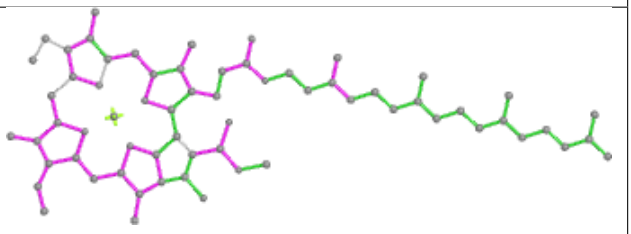


Rings

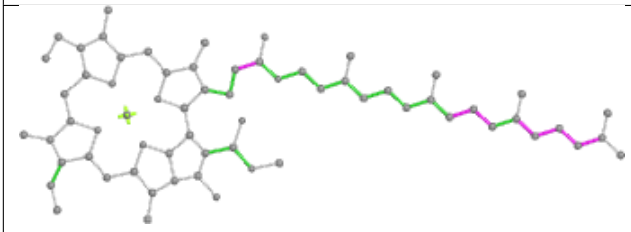
Ligand CLA A 826



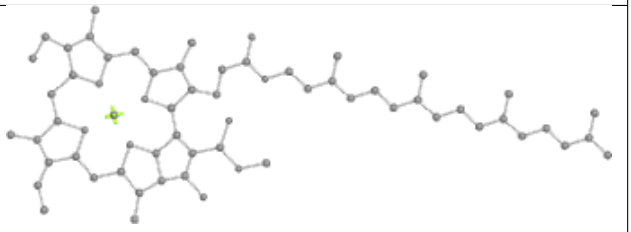
Bond lengths



Bond angles

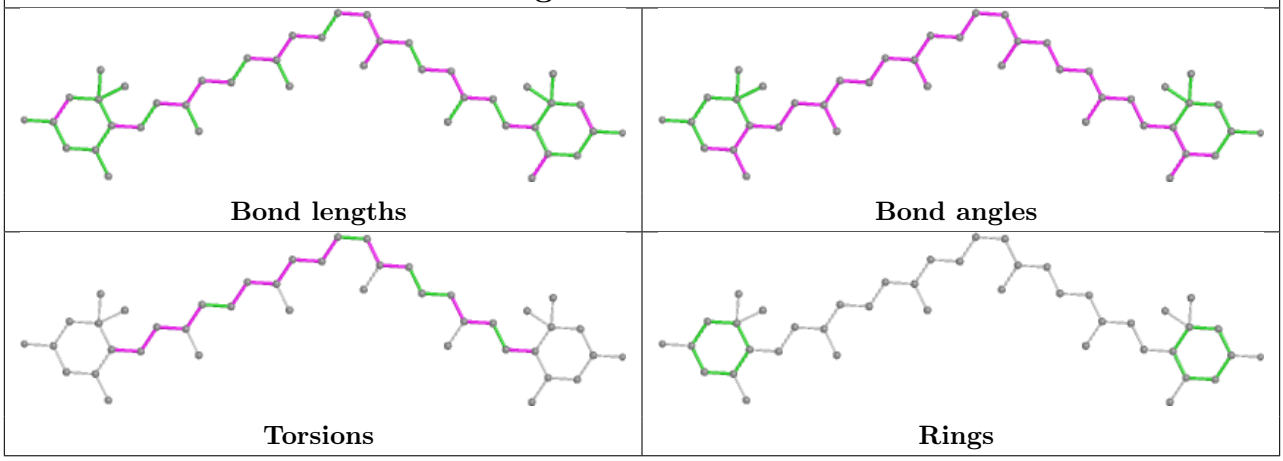


Torsions

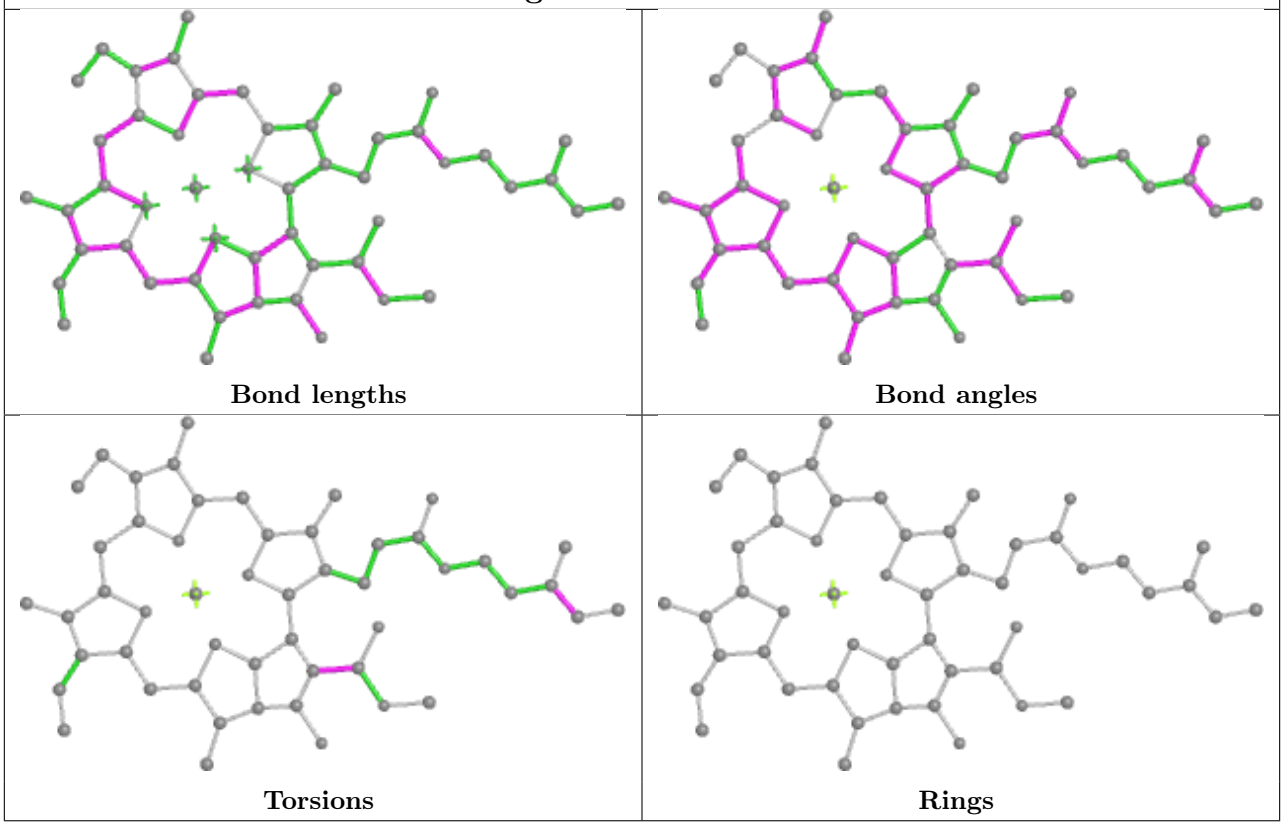


Rings

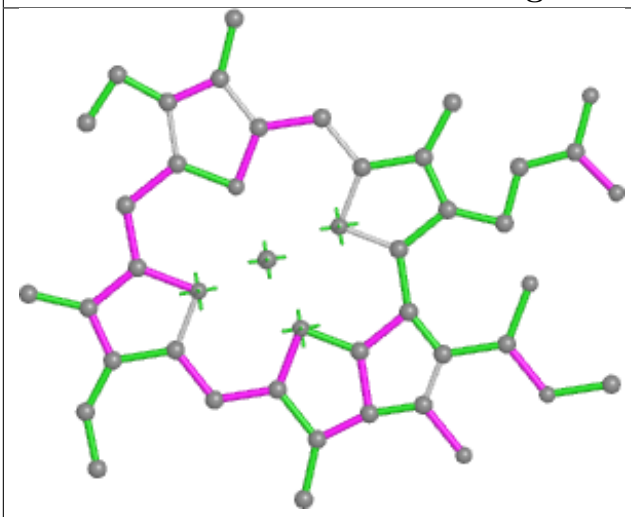
Ligand 5X6 6 315



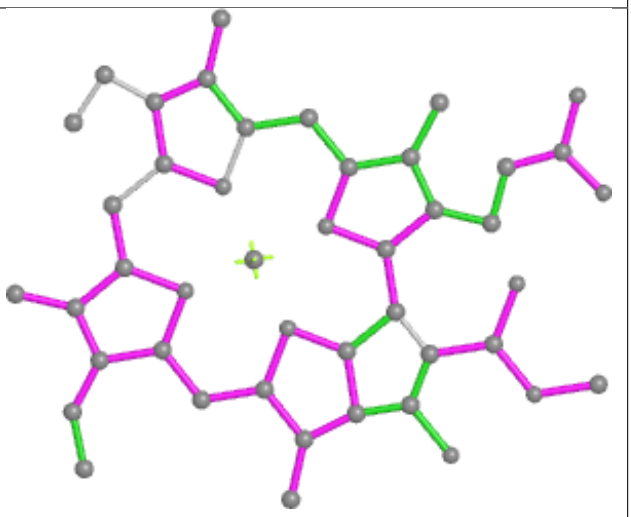
Ligand CLA B 834



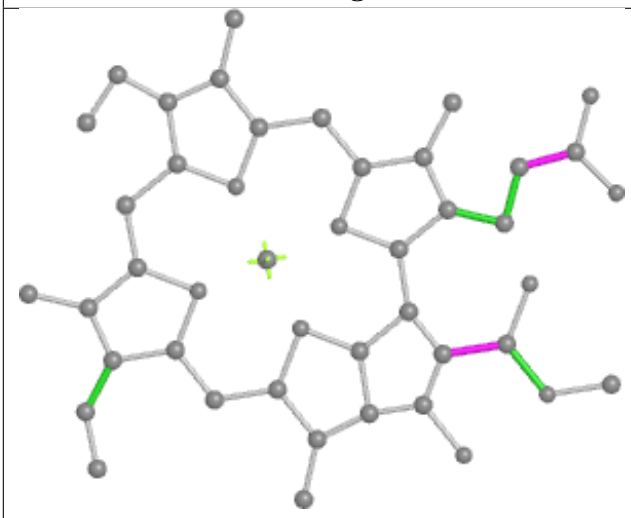
Ligand CLA F 205



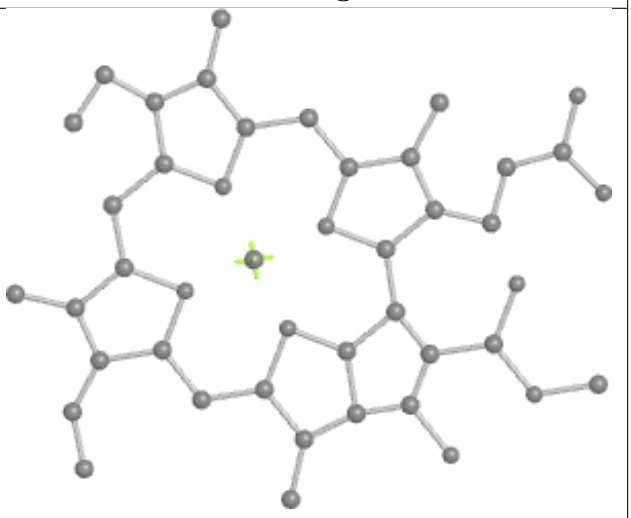
Bond lengths



Bond angles

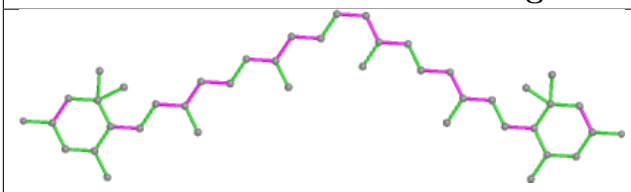


Torsions

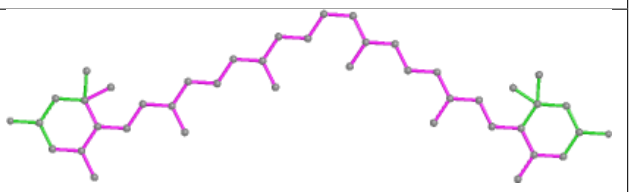


Rings

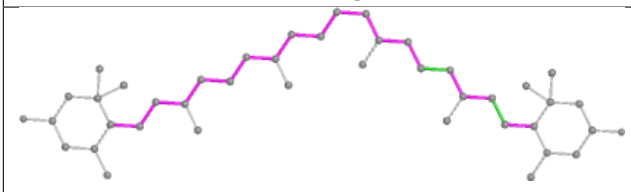
Ligand 5X6 M 101



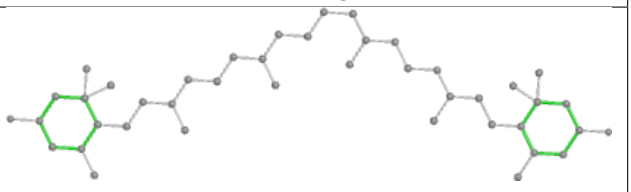
Bond lengths



Bond angles

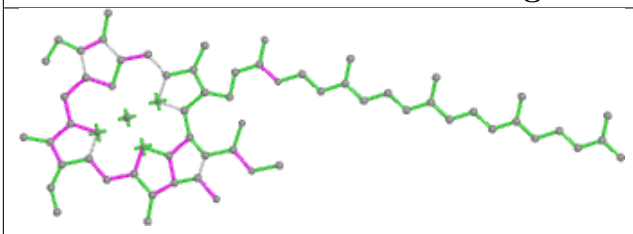


Torsions

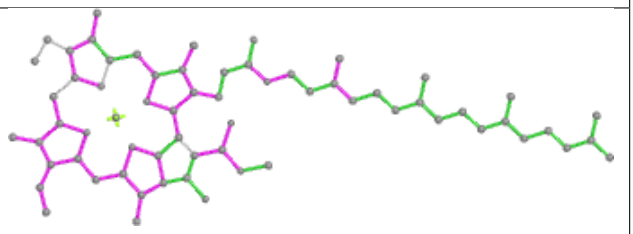


Rings

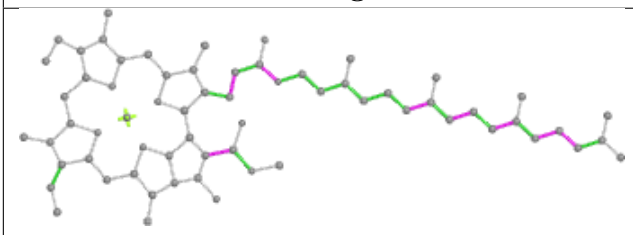
Ligand CLA A 806



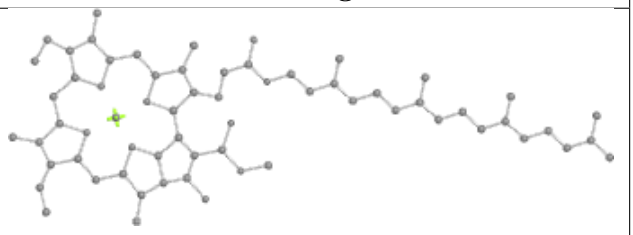
Bond lengths



Bond angles

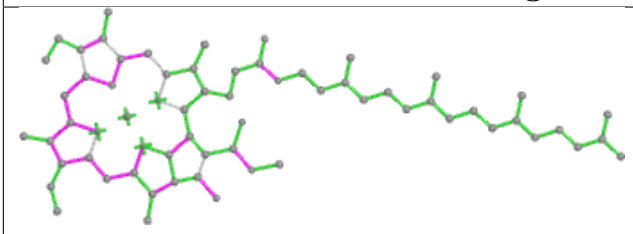


Torsions

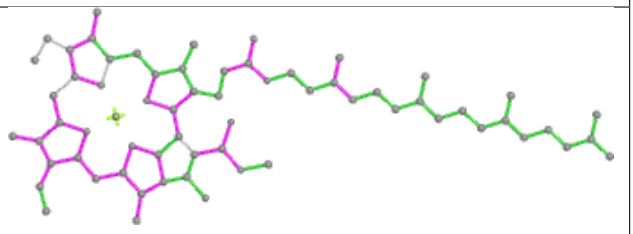


Rings

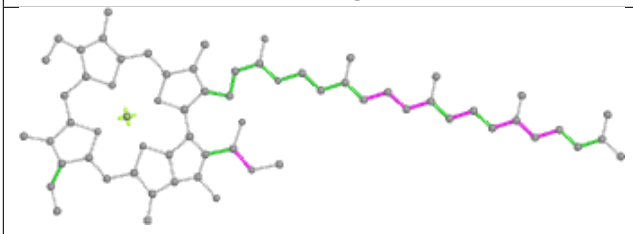
Ligand CLA B 822



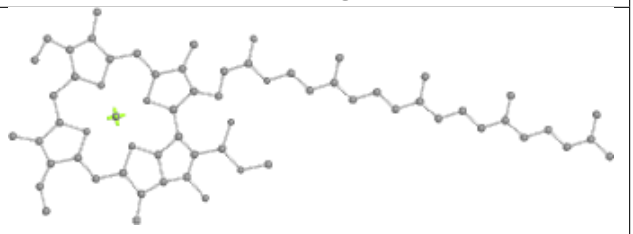
Bond lengths



Bond angles

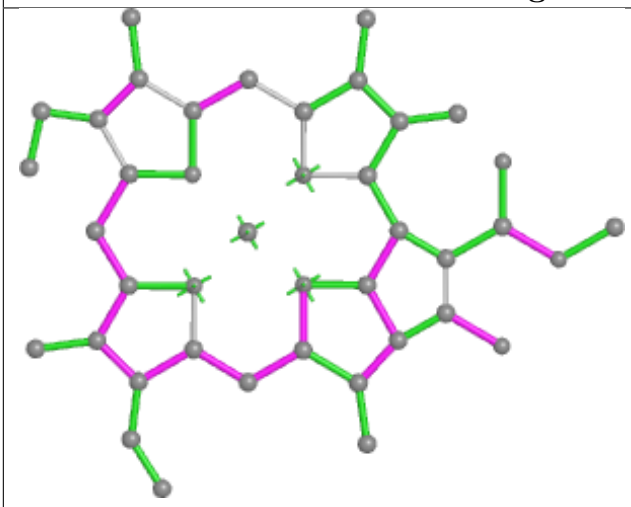


Torsions

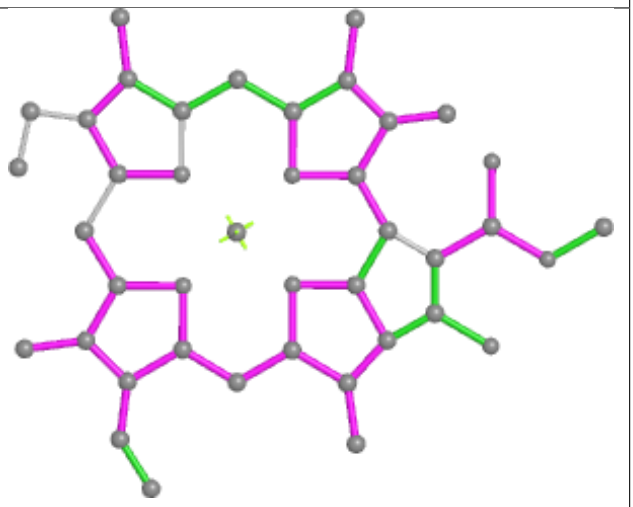


Rings

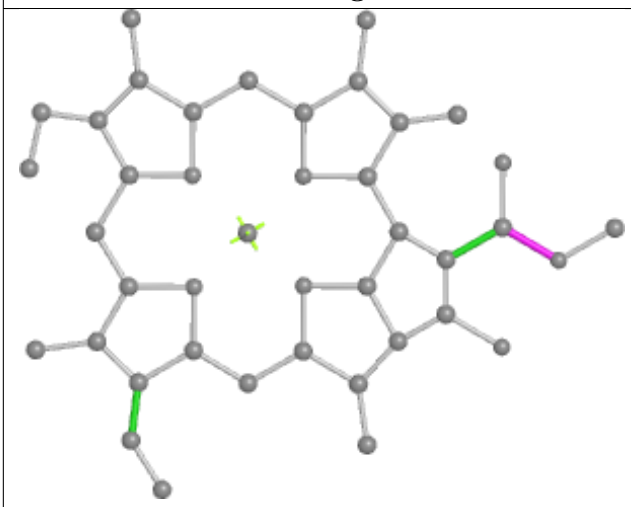
Ligand CLA 7 311



Bond lengths



Bond angles



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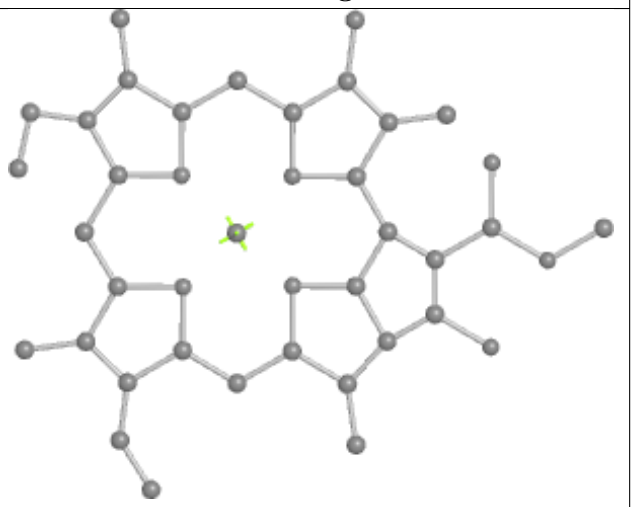
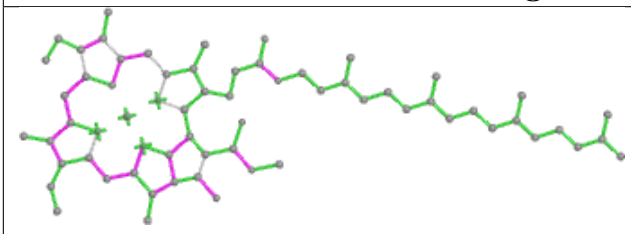
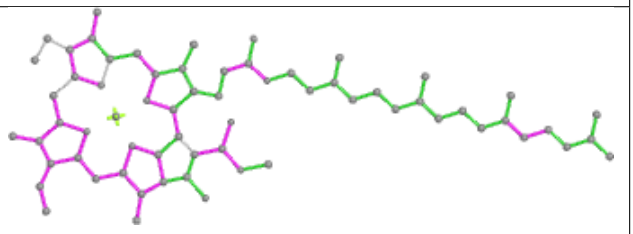


Rings

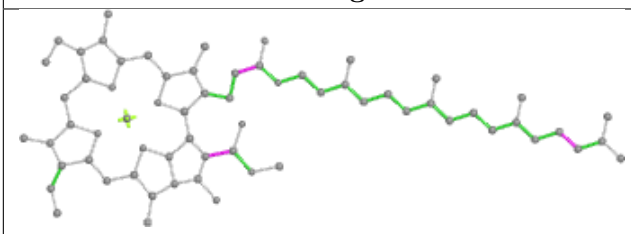
Ligand CLA B 839



Bond lengths



Bond angles



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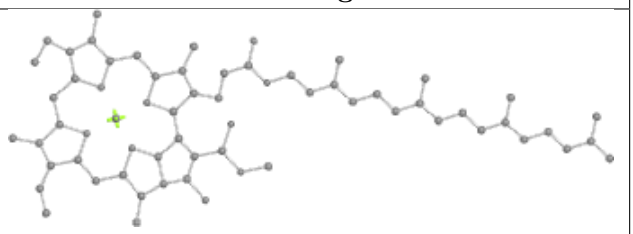
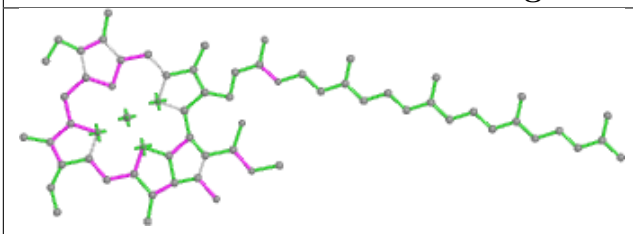
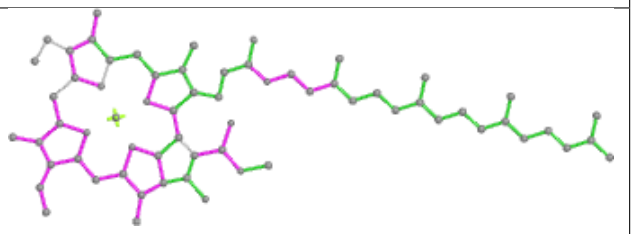


Rings

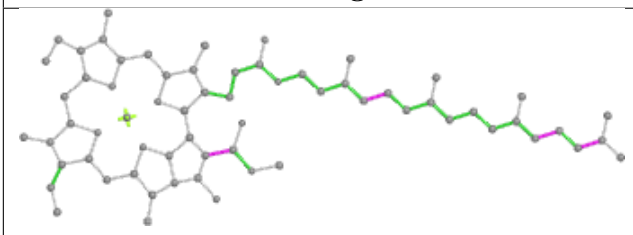
Ligand CLA B 824



Bond lengths



Bond angles



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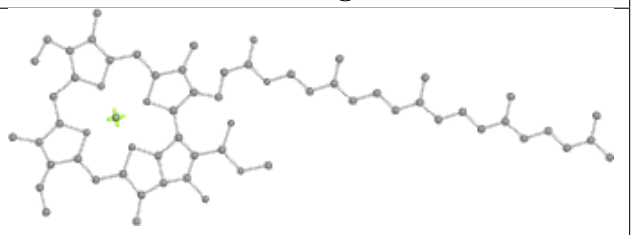
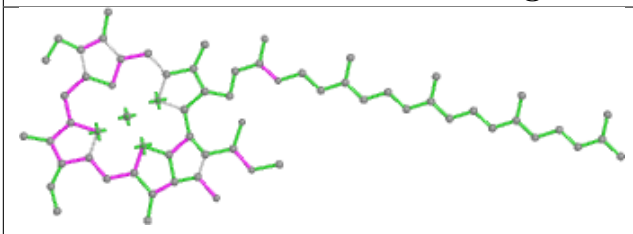


Rings

Ligand CLA A 817



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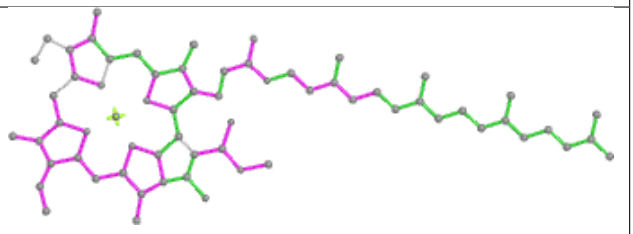
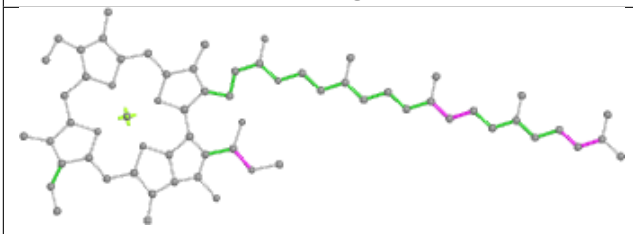


Bond angles



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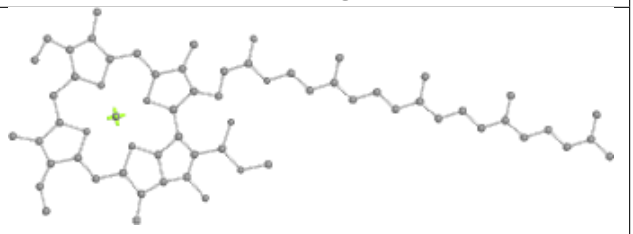
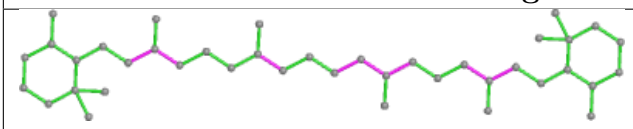
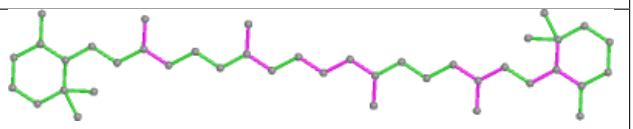


Rings

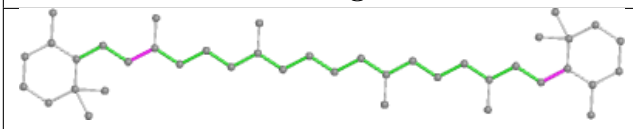
Ligand BCR A 843



Bond lengths



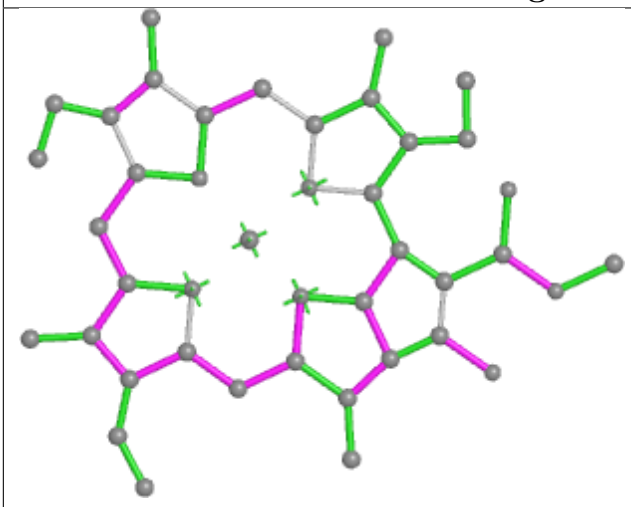
Bond angles



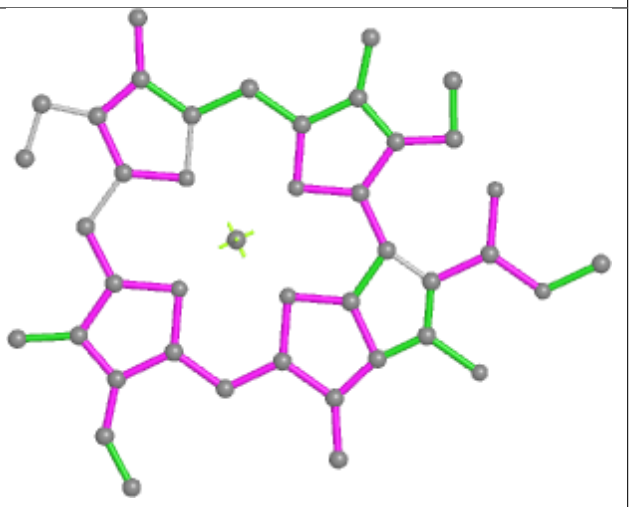
Torsions

Rings

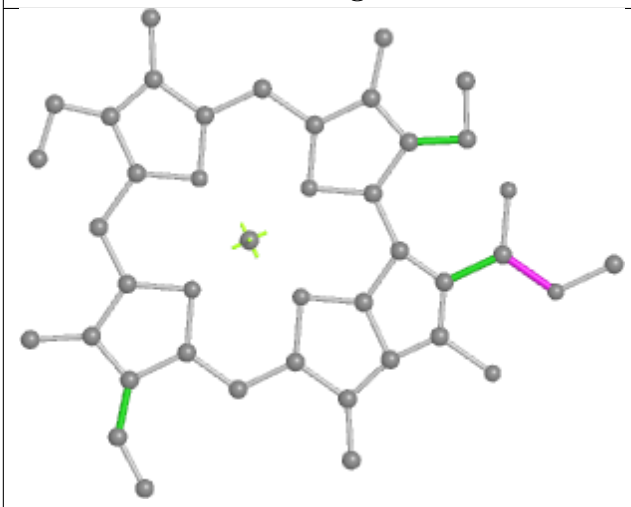
Ligand CLA 5 309



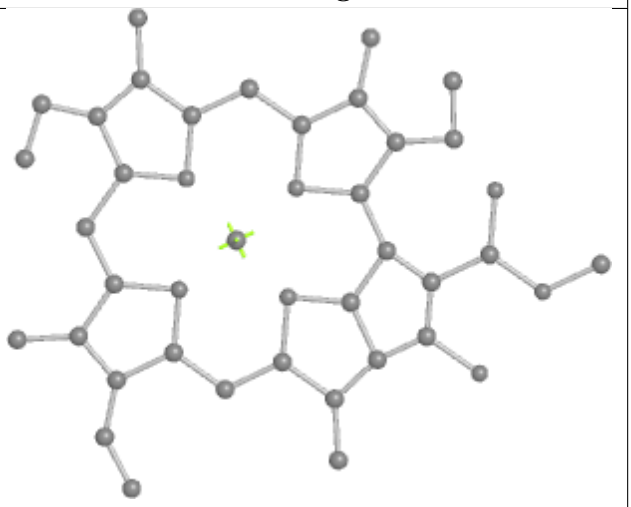
Bond lengths



Bond angles

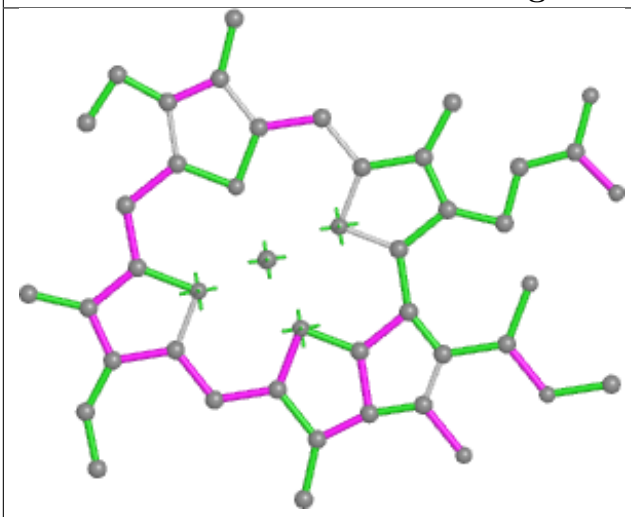


Torsions

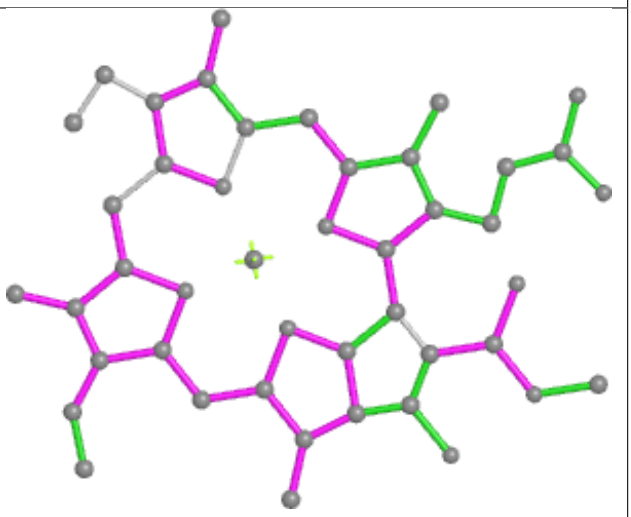


Rings

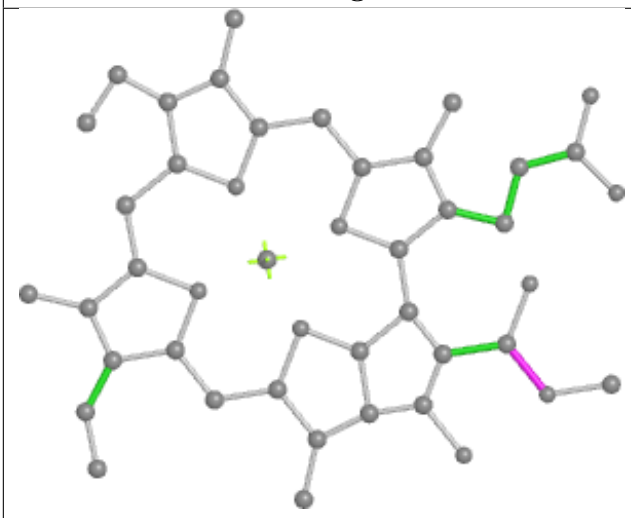
Ligand CLA 4 302



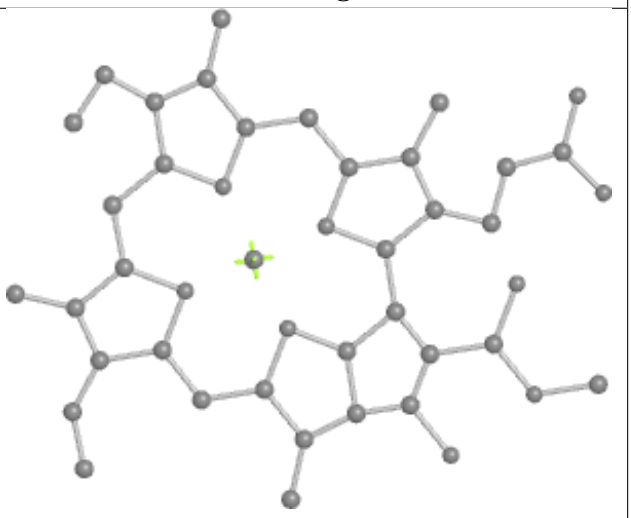
Bond lengths



Bond angles

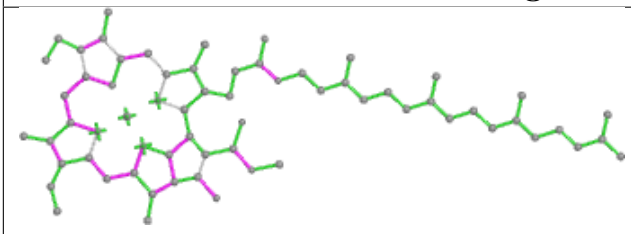


Torsions



Rings

Ligand CLA B 829



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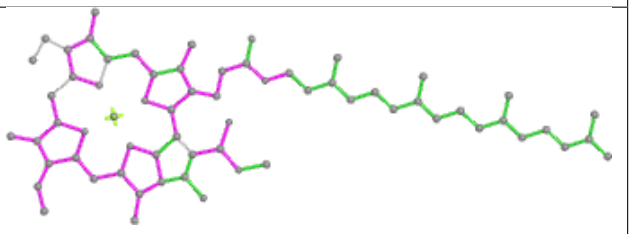
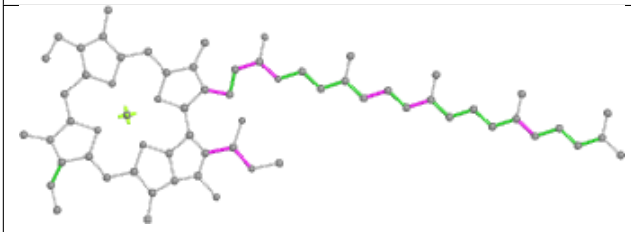
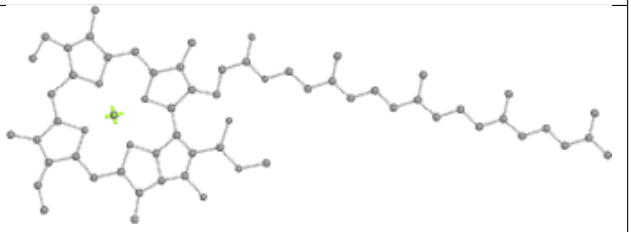


Bond angles

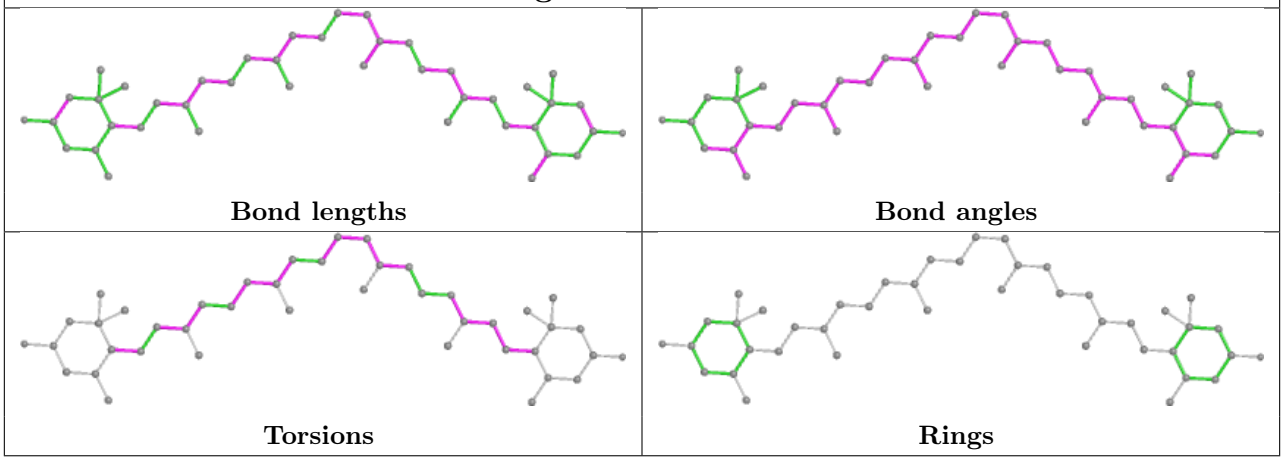


Torsions

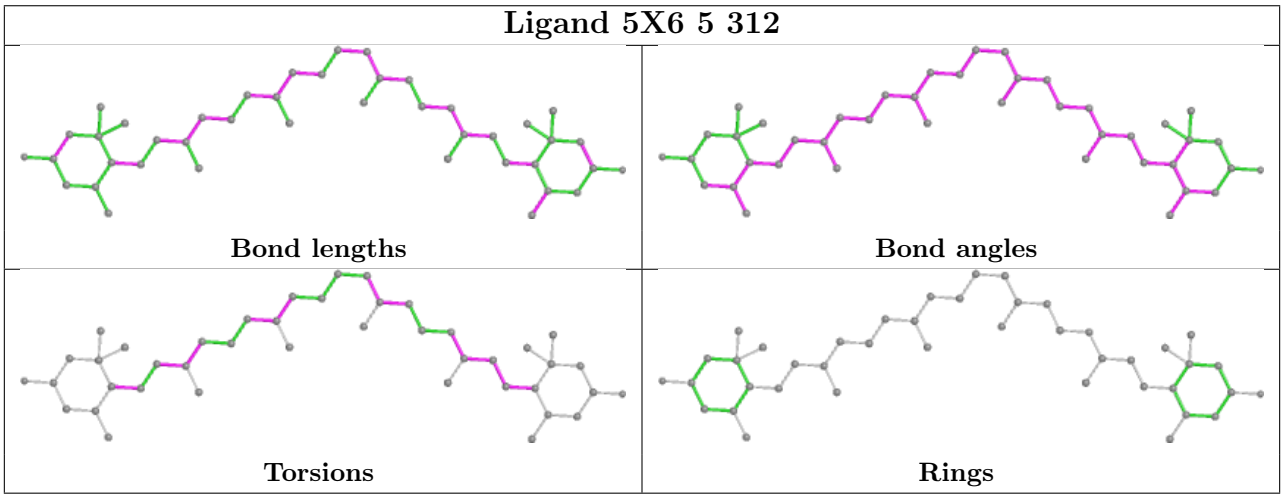


Rings

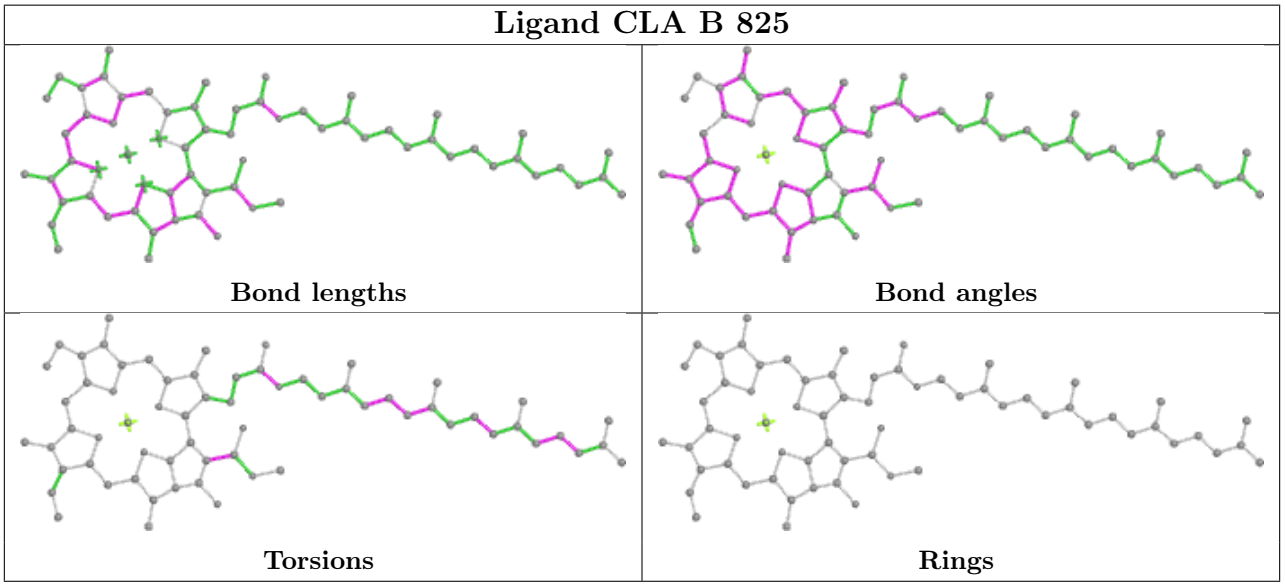
Ligand 5X6 5 314



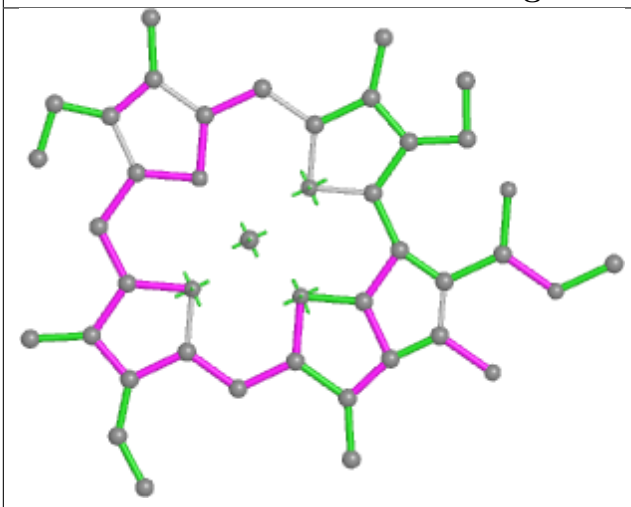
Ligand 5X6 5 312



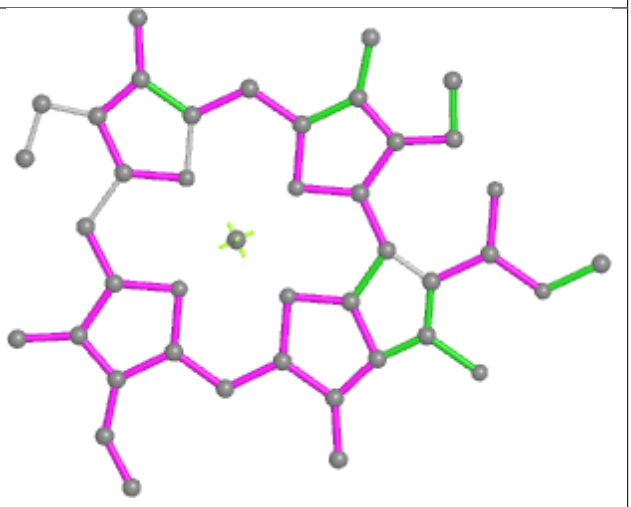
Ligand CLA B 825



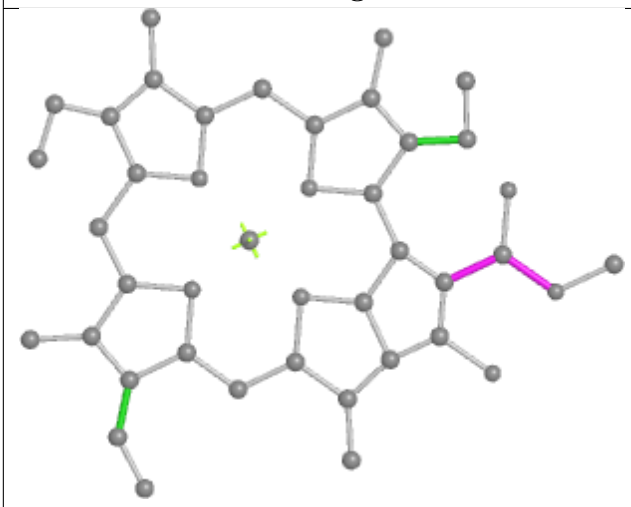
Ligand CLA A 813



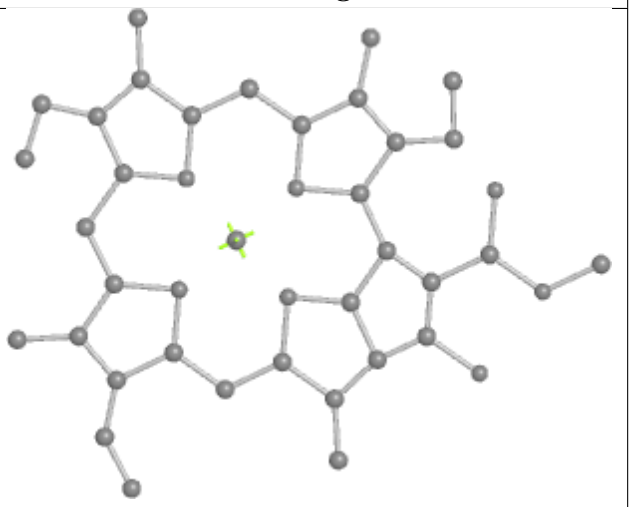
Bond lengths



Bond angles

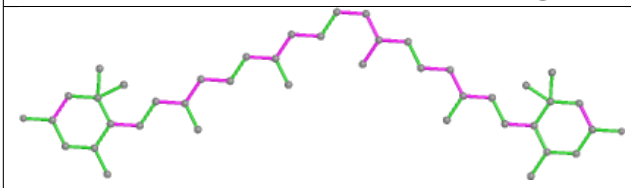


Torsions



Rings

Ligand 5X6 1 311



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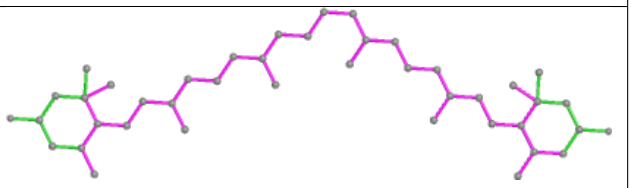
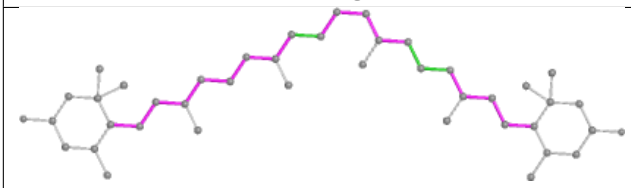
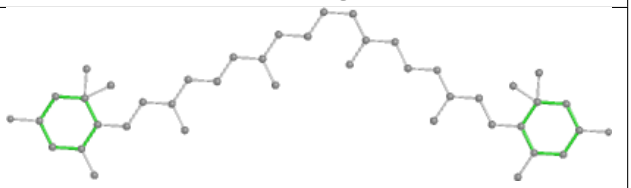


Bond angles

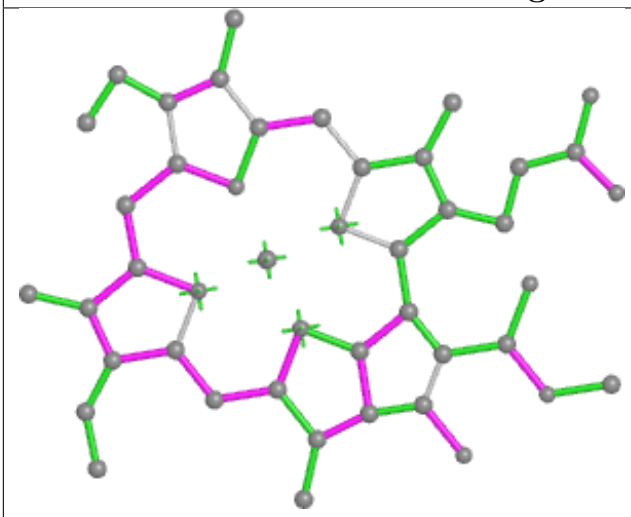


Torsions

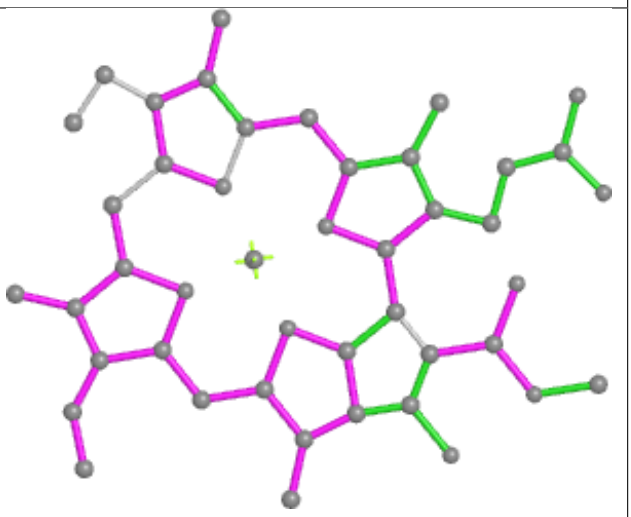


Rings

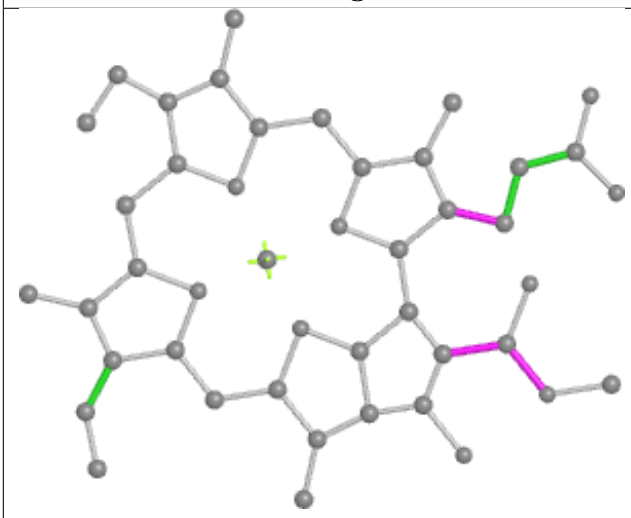
Ligand CLA 5 311



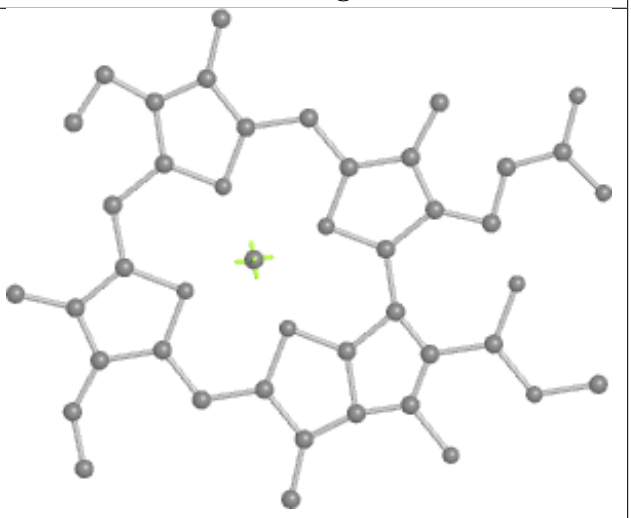
Bond lengths



Bond angles

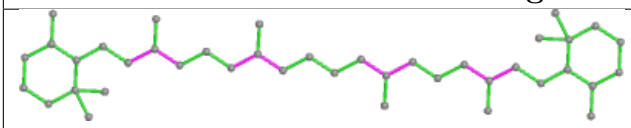


Torsions

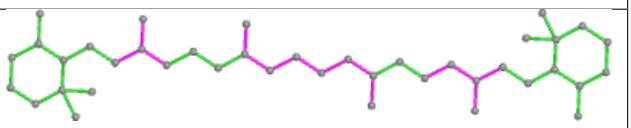


Rings

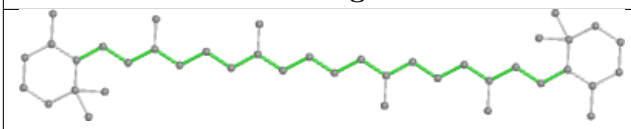
Ligand BCR 5 315



Bond lengths



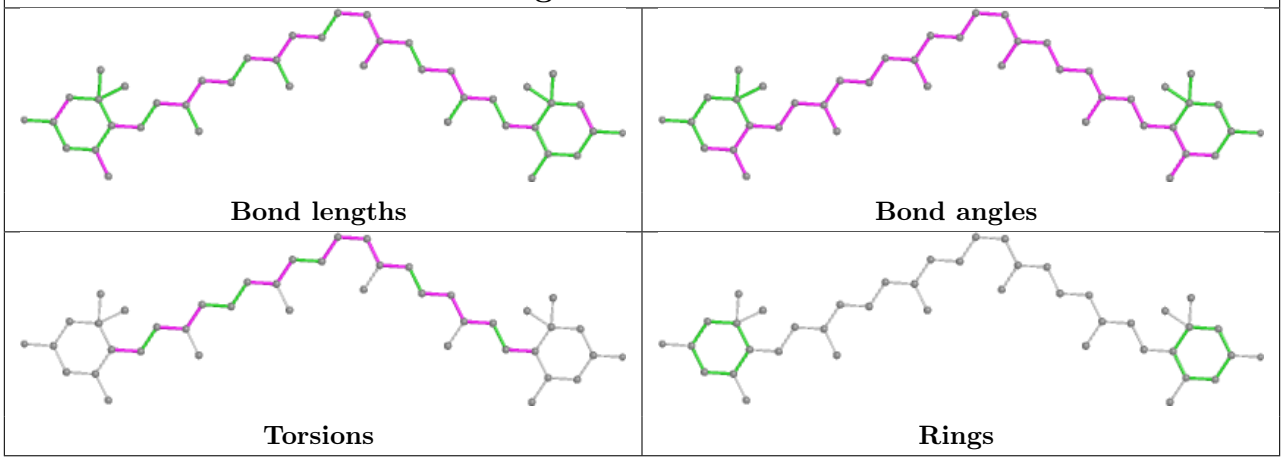
Bond angles



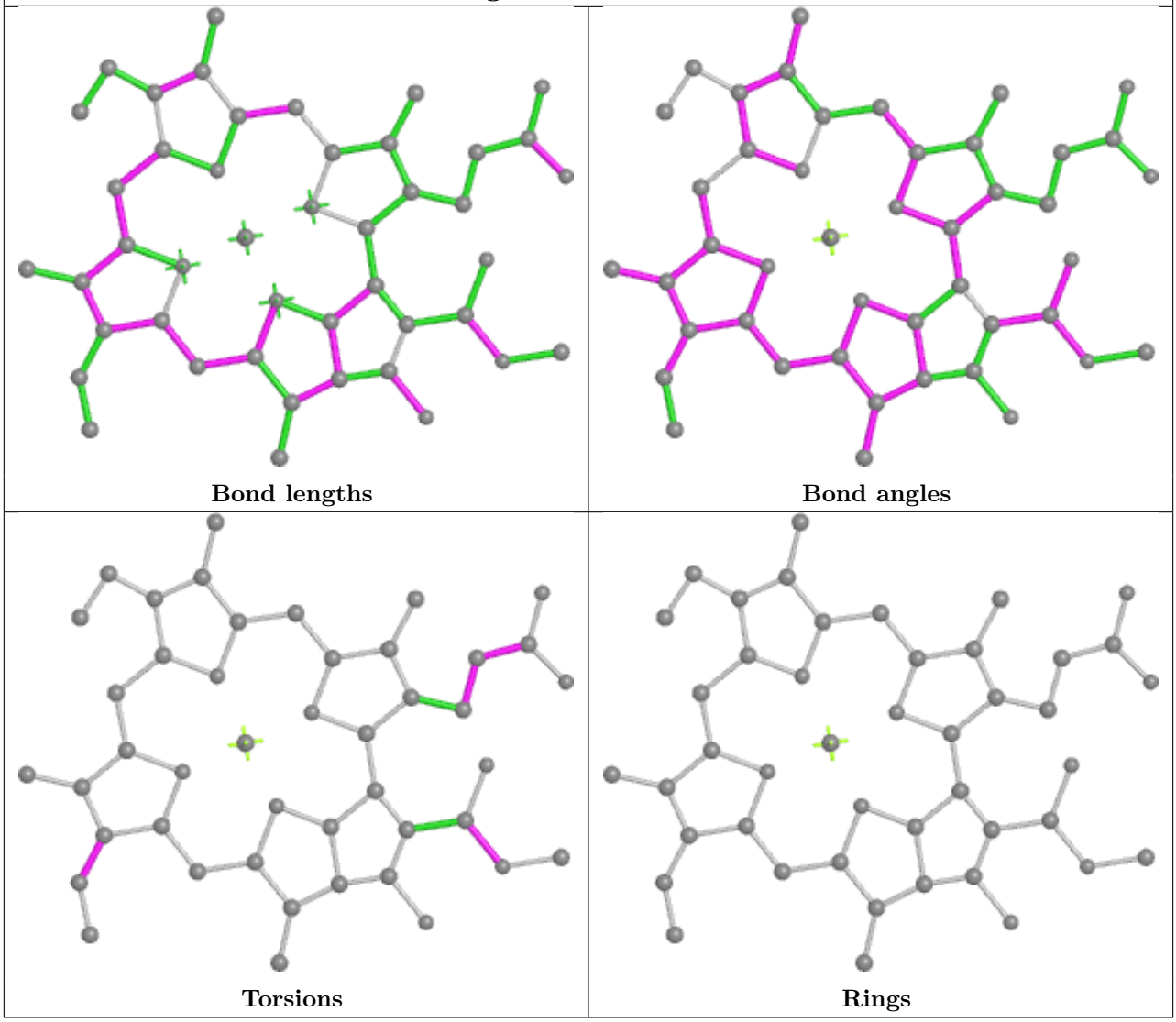
Torsions

Rings

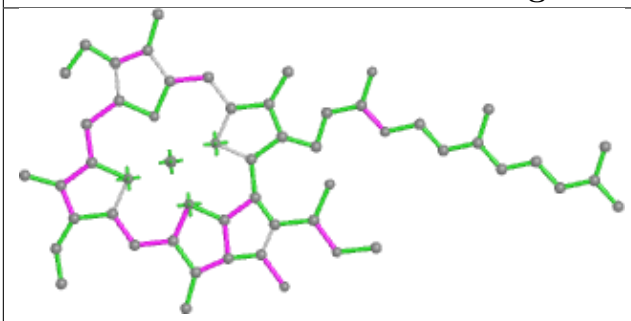
Ligand 5X6 7 316



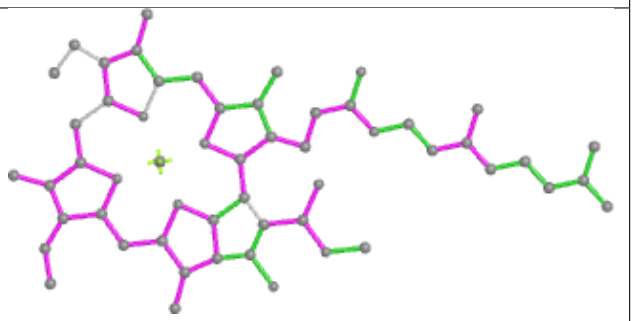
Ligand CLA 5 305



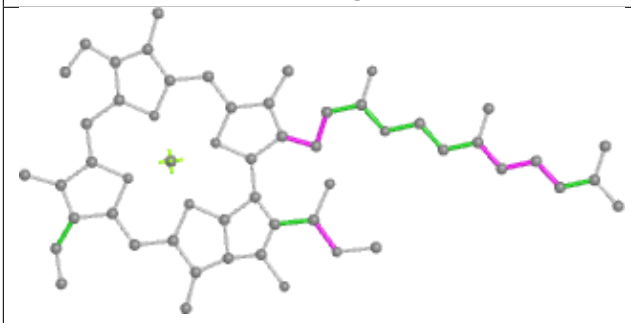
Ligand CLA 6 306



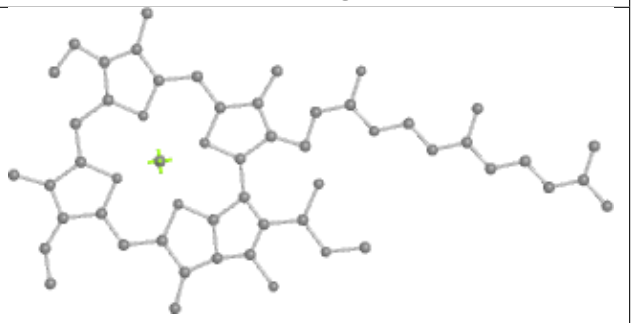
Bond lengths



Bond angles

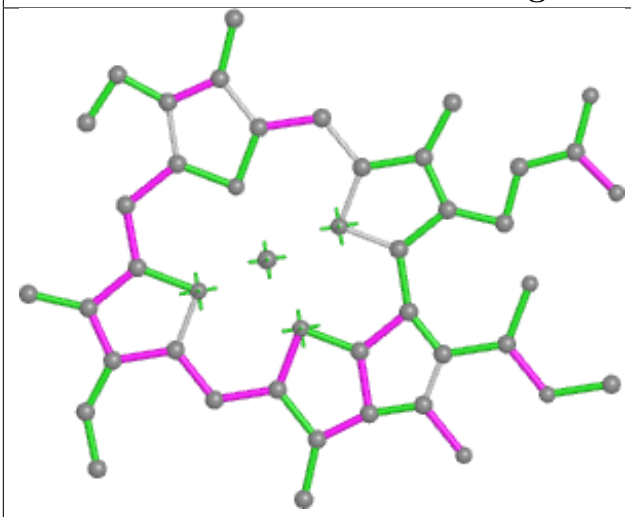


Torsions

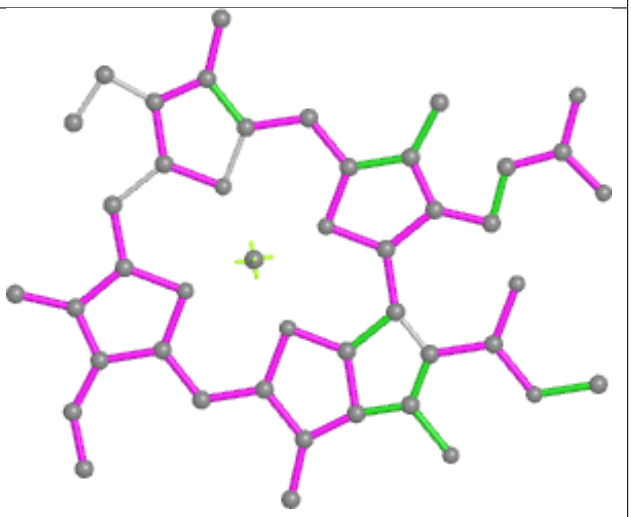


Rings

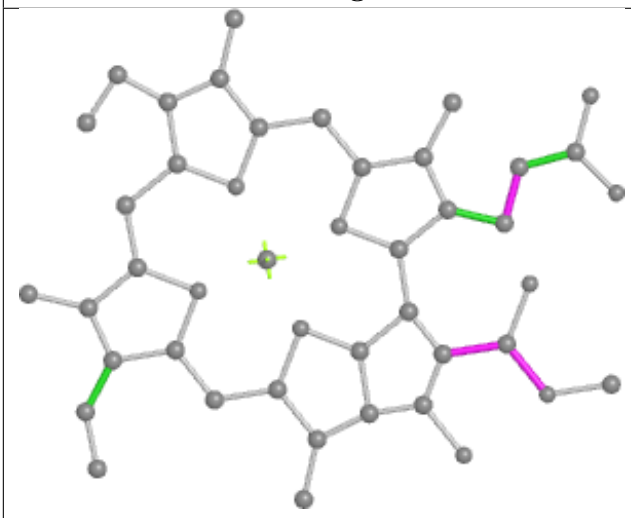
Ligand CLA 4 312



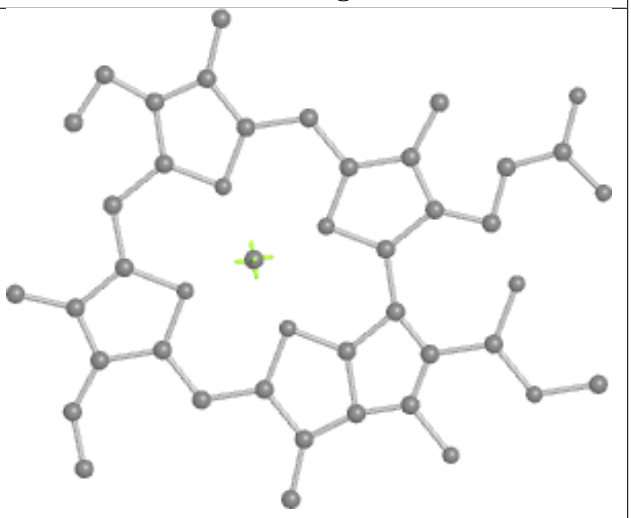
Bond lengths



Bond angles

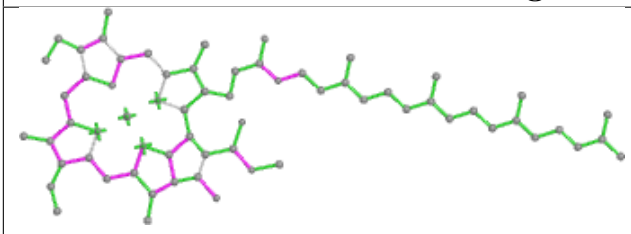


Torsions

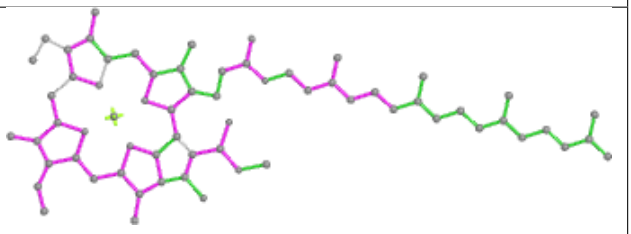


Rings

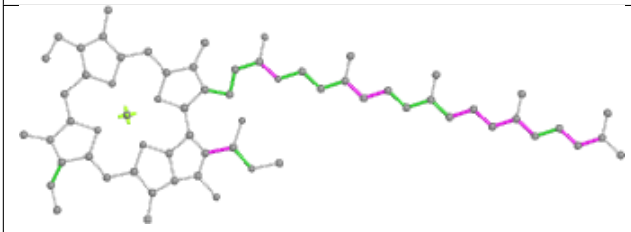
Ligand CLA Z 204



Bond lengths



Bond angles



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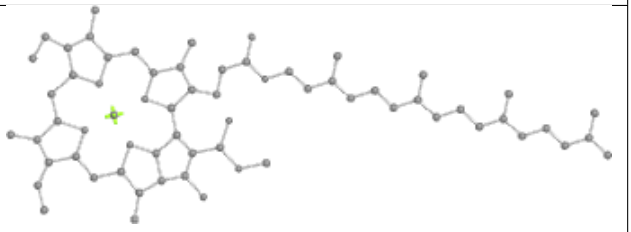
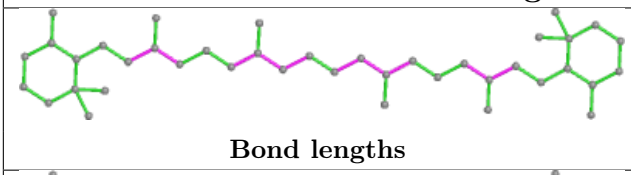


Rings

Ligand BCR F 201



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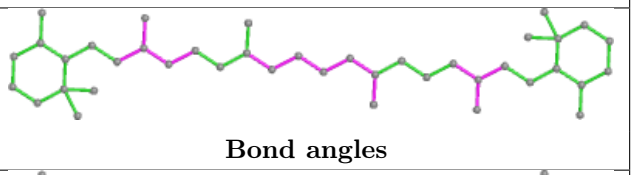
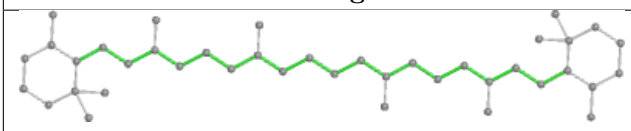


Bond angles



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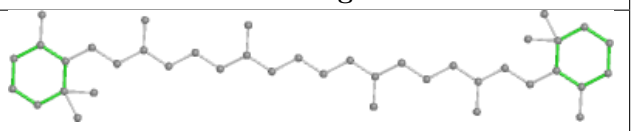
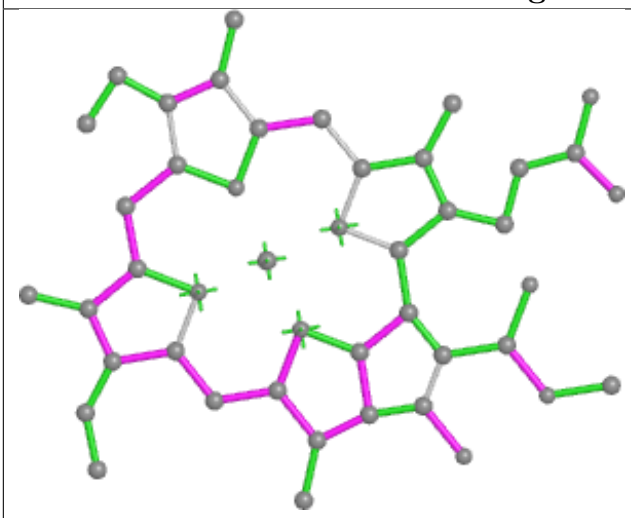
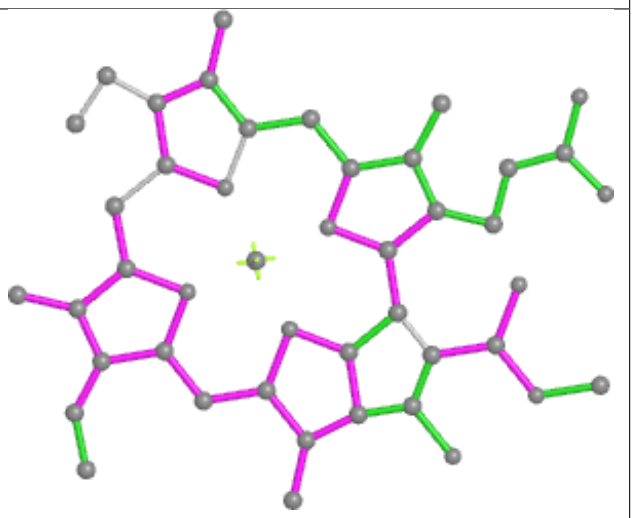


Rings

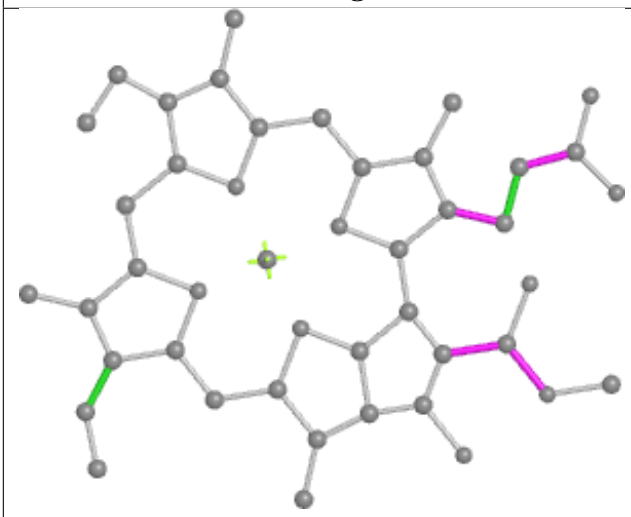
Ligand CLA 7 303



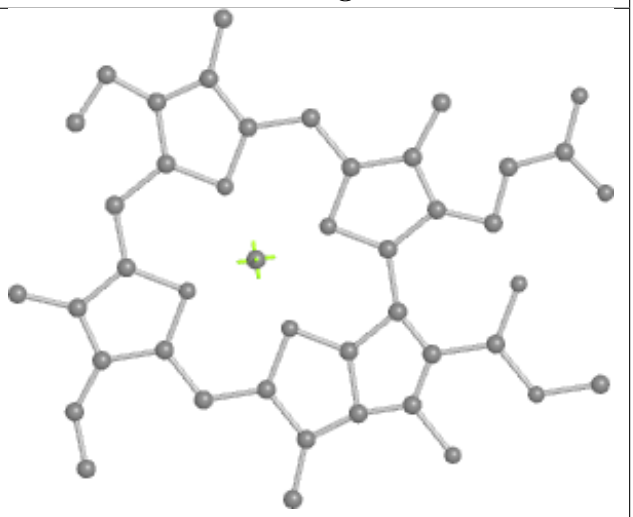
Bond lengths



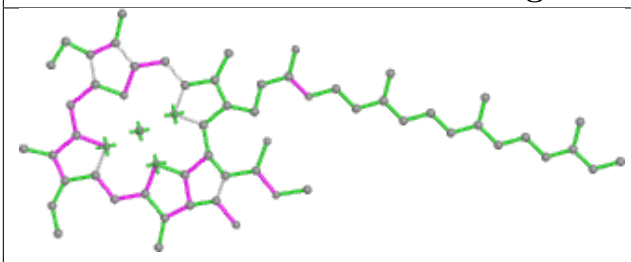
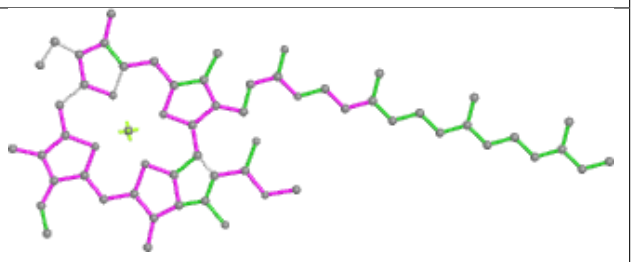
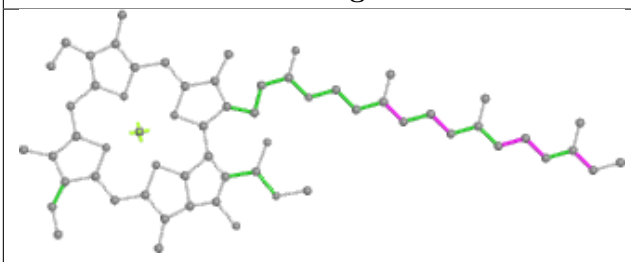
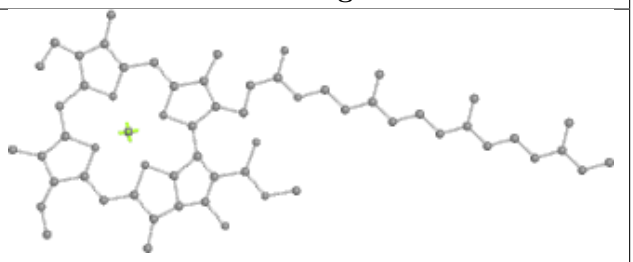
Bond angles

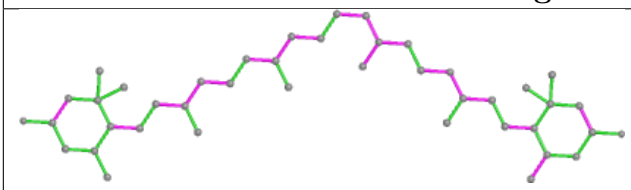
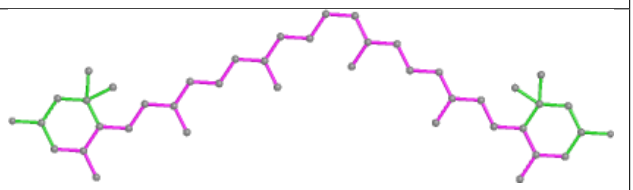
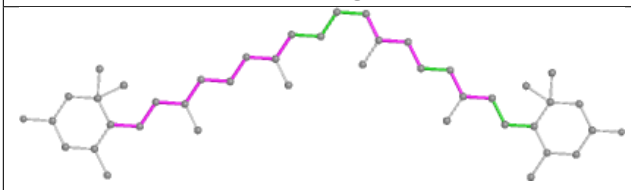
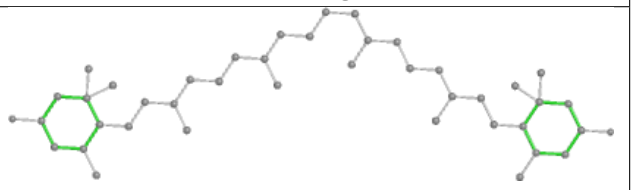


Torsions

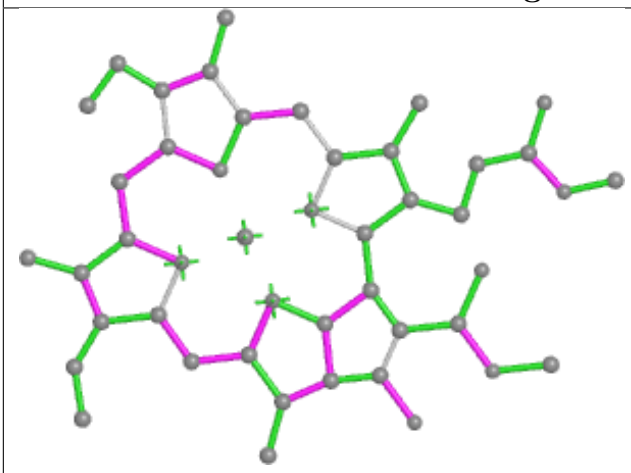


Rings

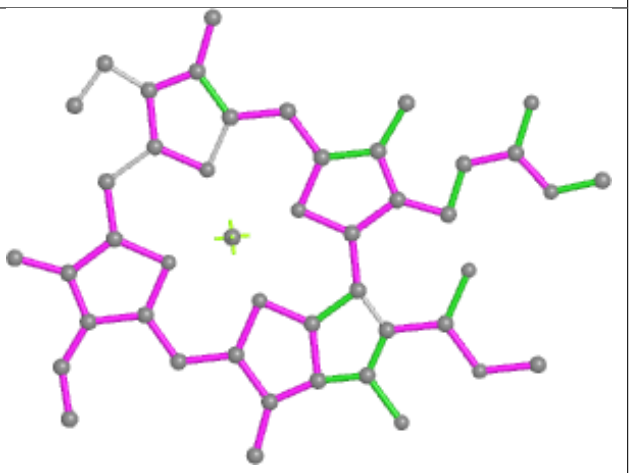
Ligand CLA F 204	
 Bond lengths	 Bond angles
 Torsions	 Rings

Ligand 5X6 4 313	
 Bond lengths	 Bond angles
 Torsions	 Rings

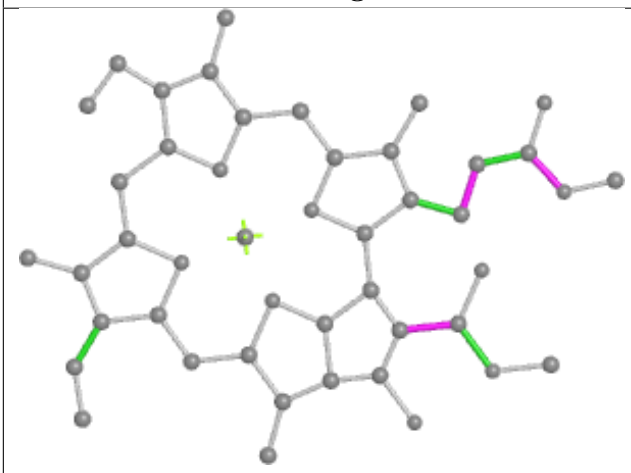
Ligand CLA O 203



Bond lengths



Bond angles



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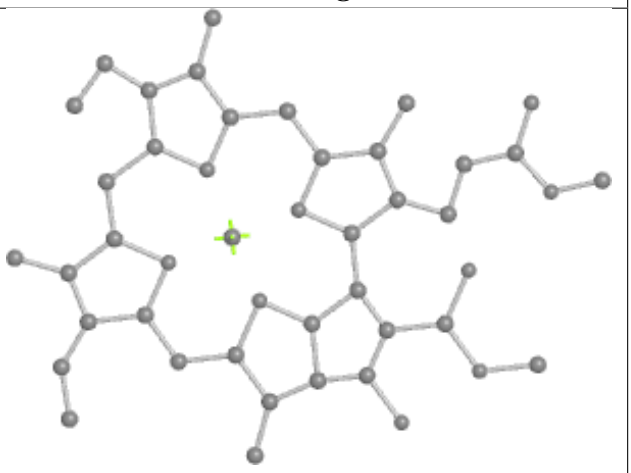
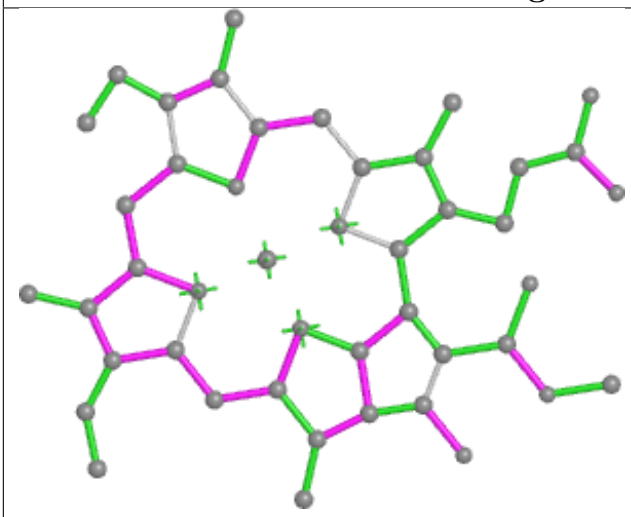


Rings

Ligand CLA 5 301



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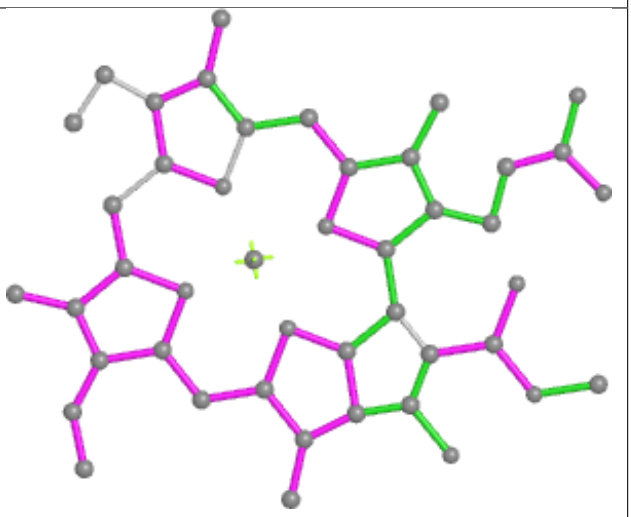
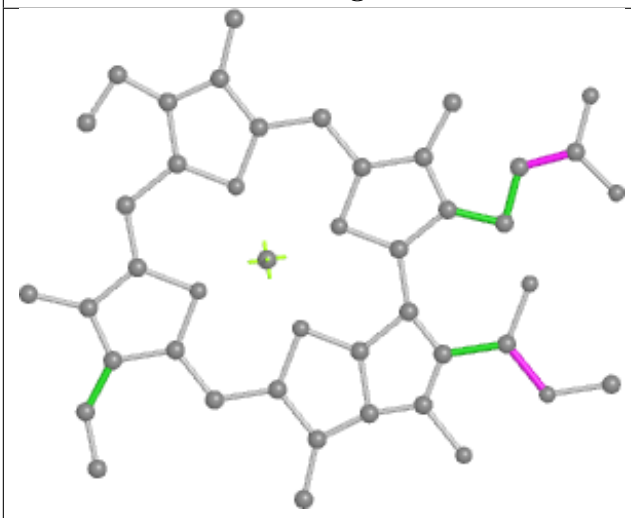


Bond angles



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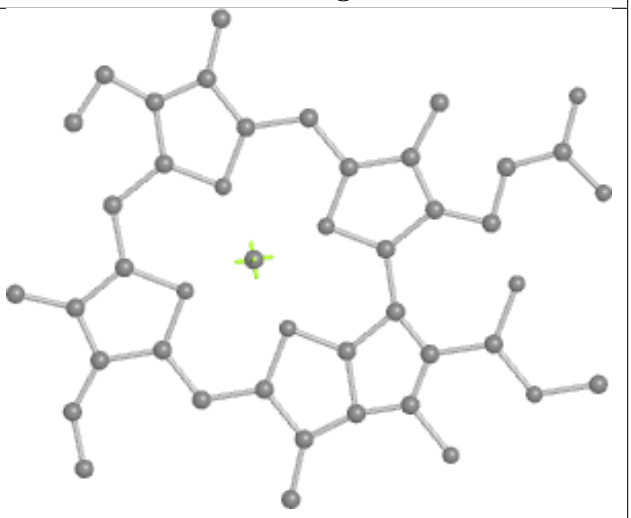
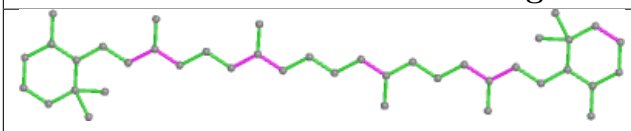
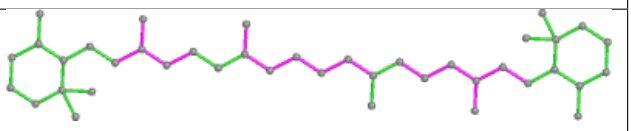


Rings

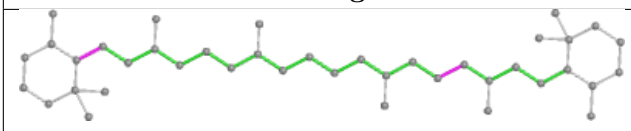
Ligand BCR J 103



Bond lengths



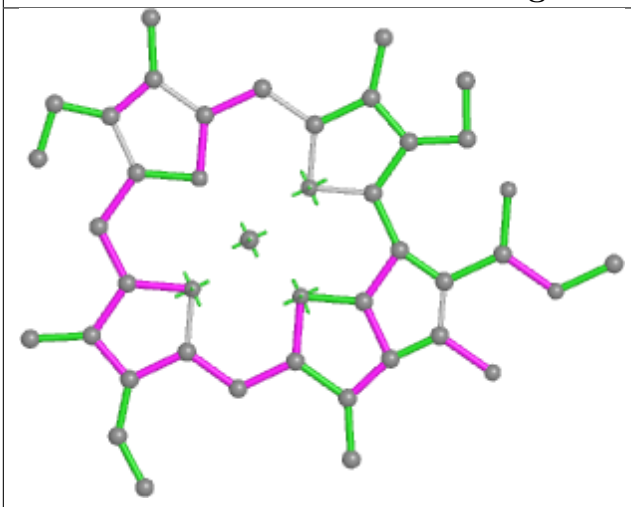
Bond angles



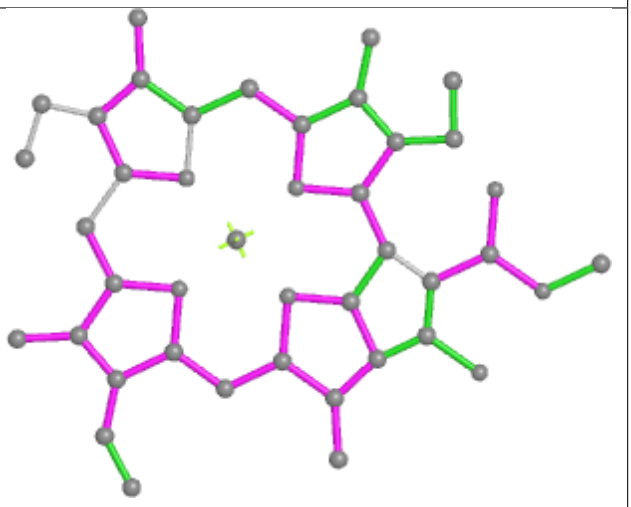
Torsions

Rings

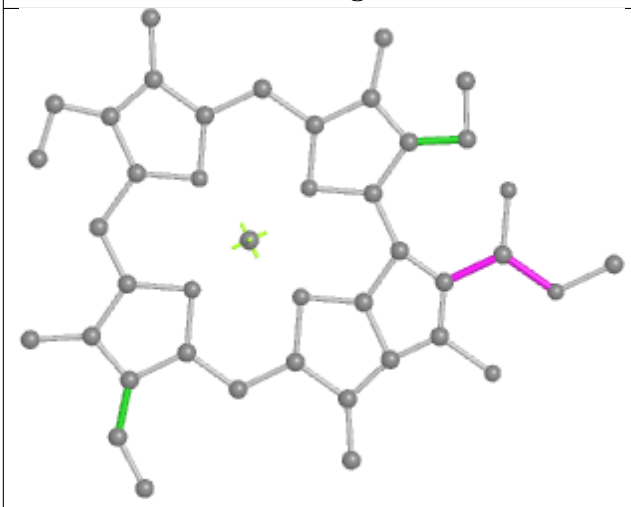
Ligand CLA 6 314



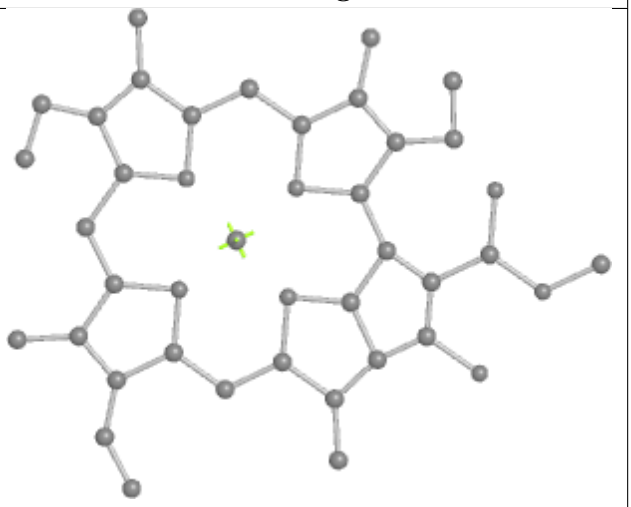
Bond lengths



Bond angles

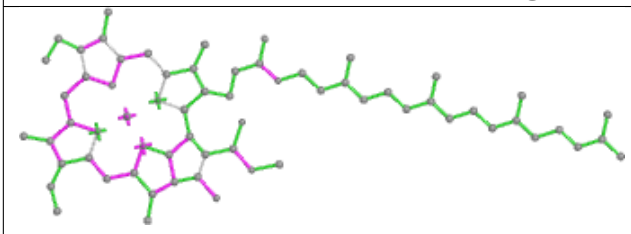


Torsions

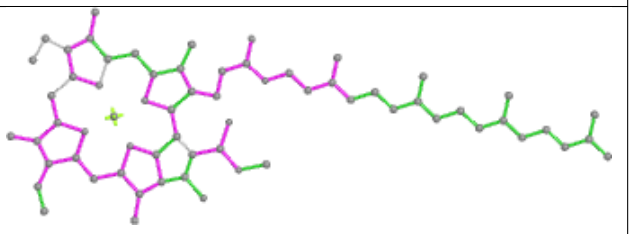


Rings

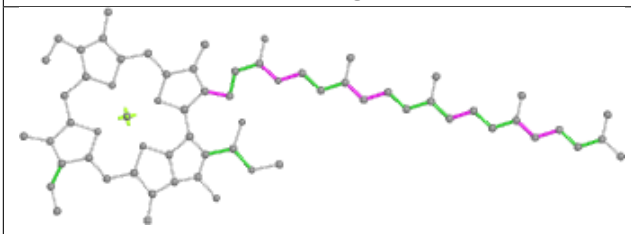
Ligand CLA A 807



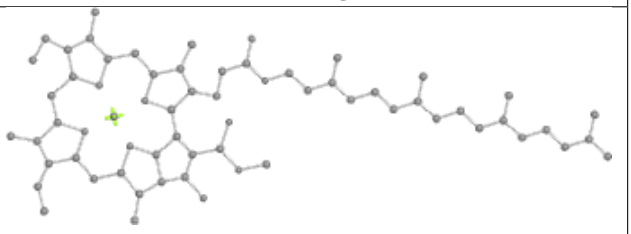
Bond lengths



Bond angles

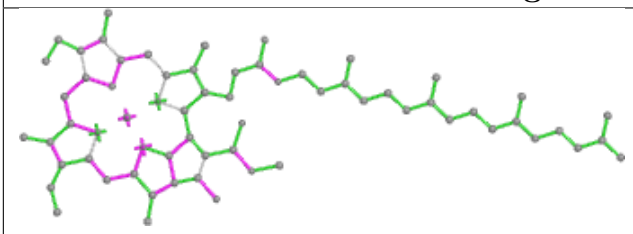


Torsions

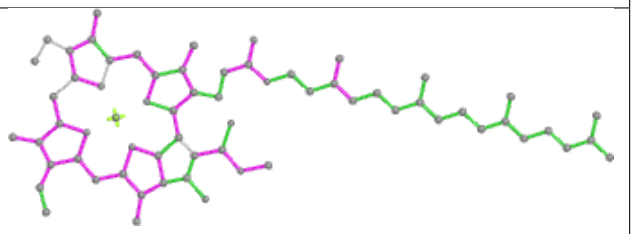


Rings

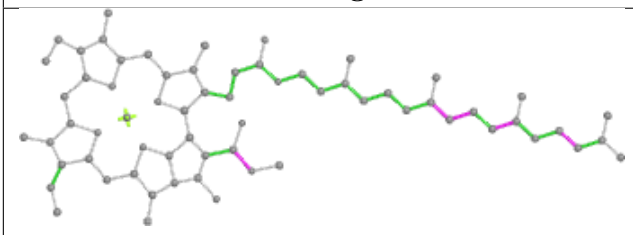
Ligand CLA A 848



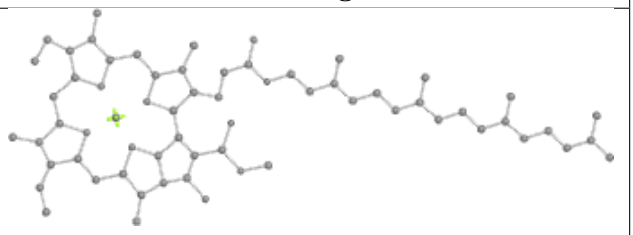
Bond lengths



Bond angles

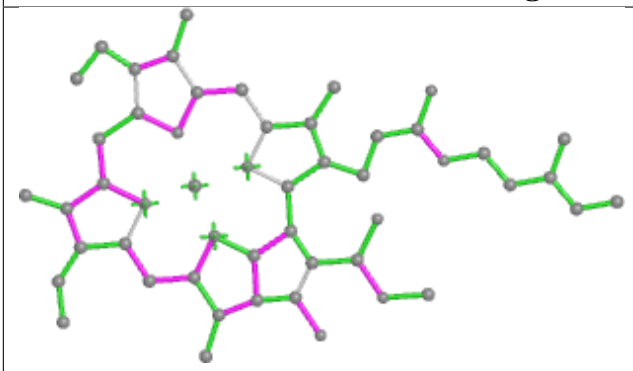


Torsions

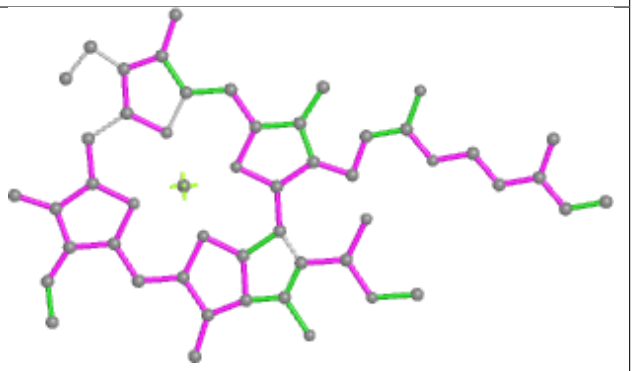


Rings

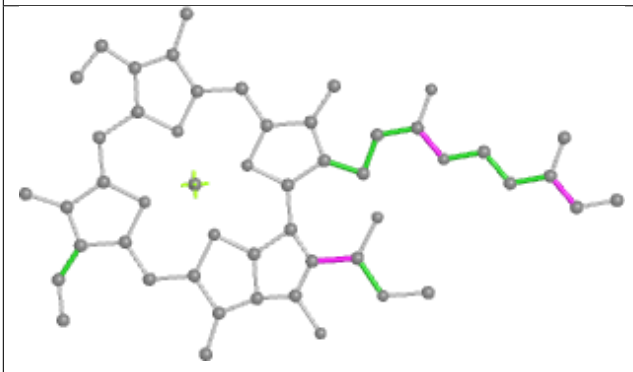
Ligand CLA A 835



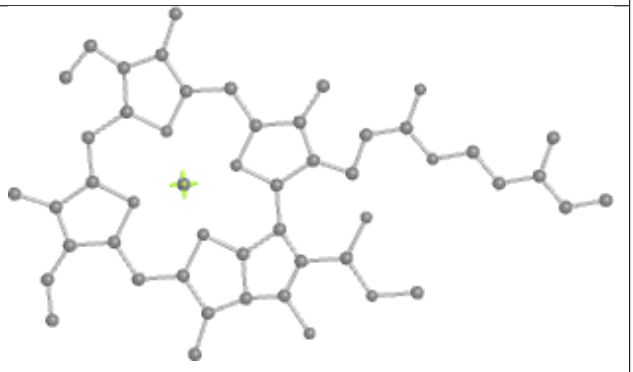
Bond lengths



Bond angles

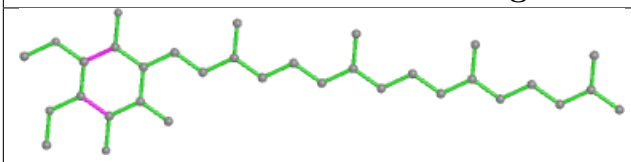


Torsions



Rings

Ligand A1L64 A 840



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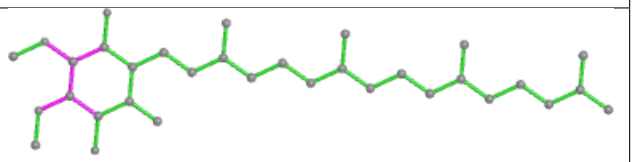
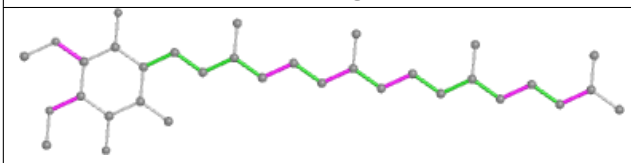
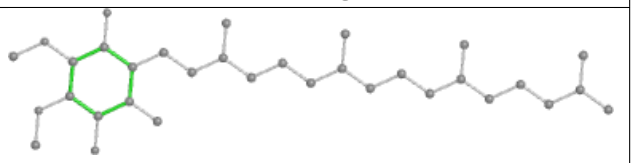


Bond angles

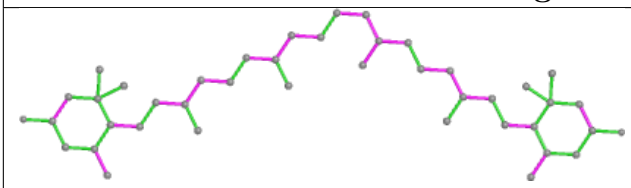


Torsions

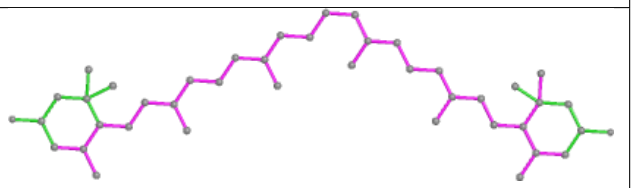


Rings

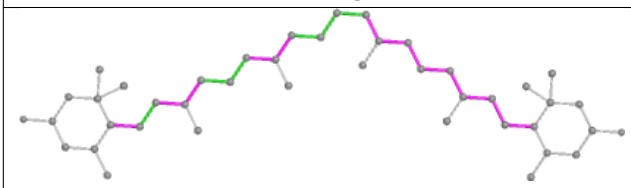
Ligand 5X6 1 313



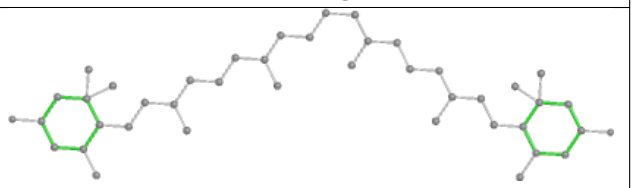
Bond lengths



Bond angles

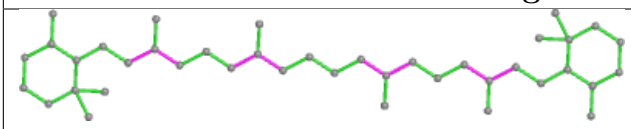


Torsions

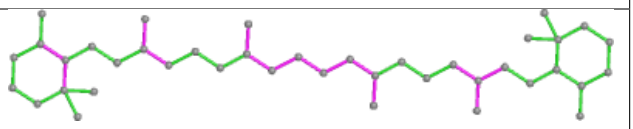


Rings

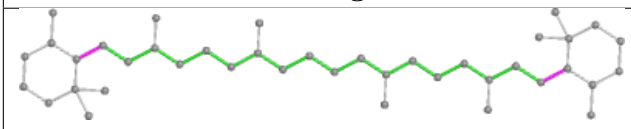
Ligand BCR B 842



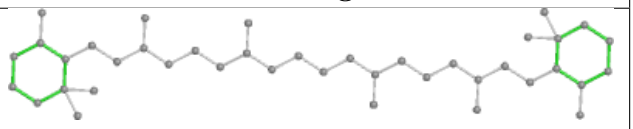
Bond lengths



Bond angles

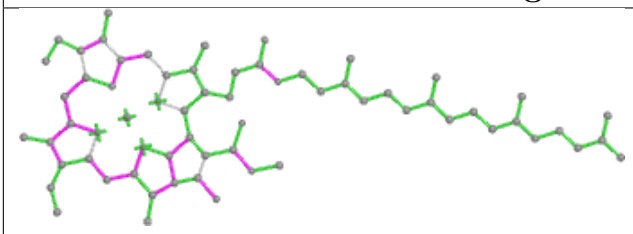


Torsions

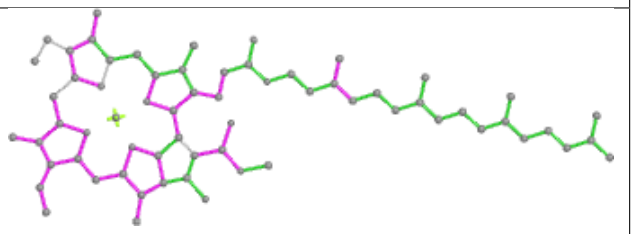


Rings

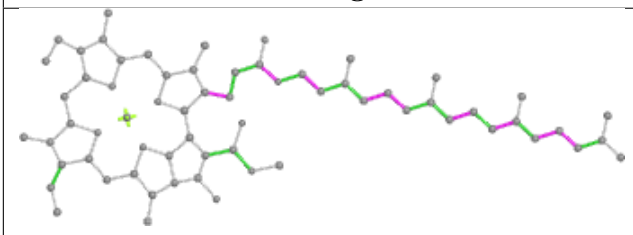
Ligand CLA B 831



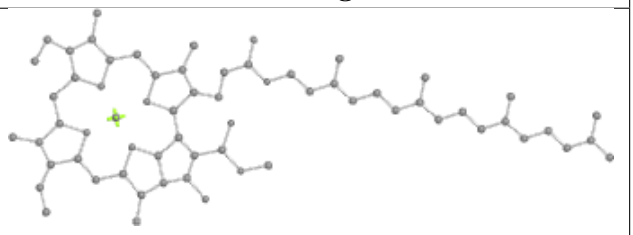
Bond lengths



Bond angles

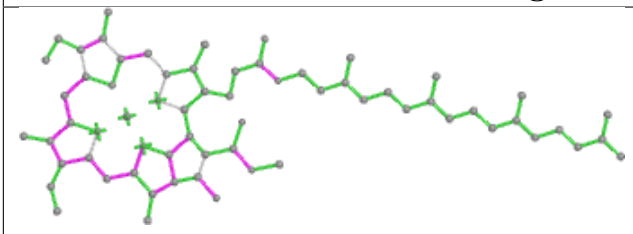


Torsions

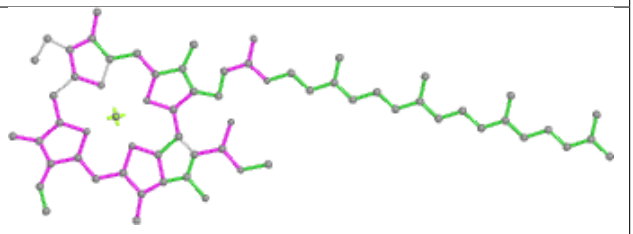


Rings

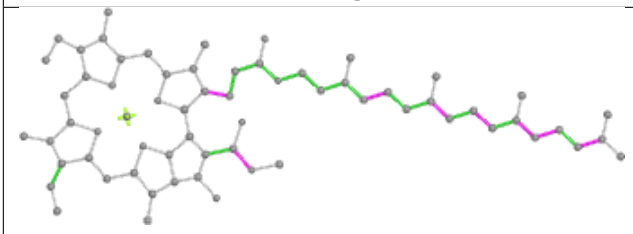
Ligand CLA 6 304



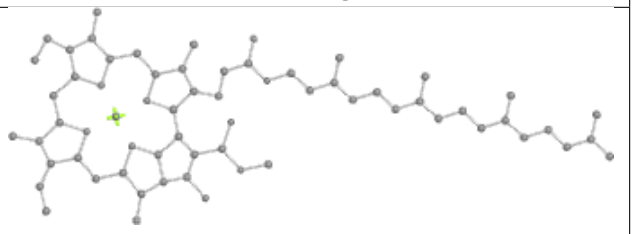
Bond lengths



Bond angles

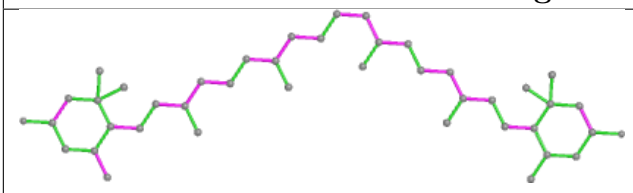


Torsions

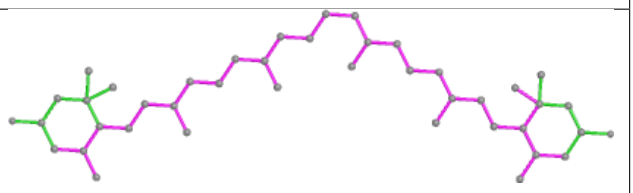


Rings

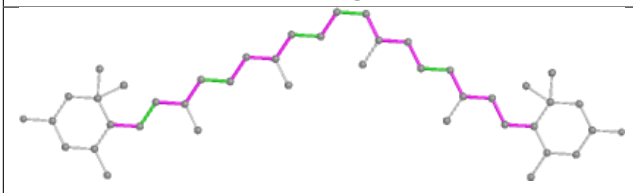
Ligand 5X6 3 306



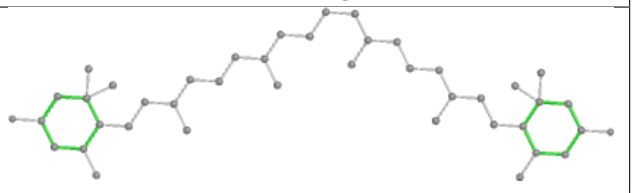
Bond lengths



Bond angles

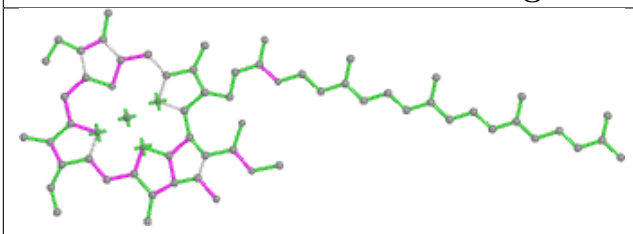


Torsions

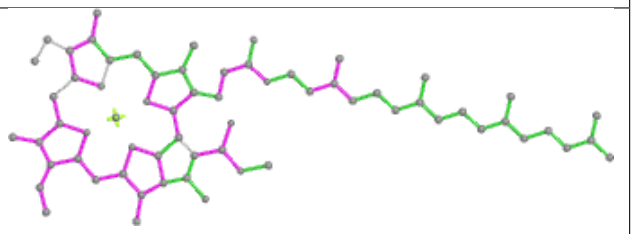


Rings

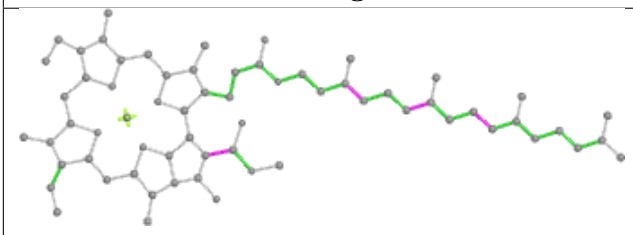
Ligand CLA A 837



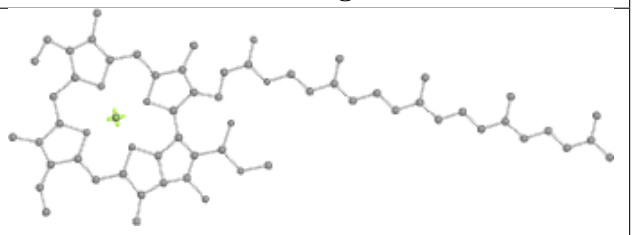
Bond lengths



Bond angles

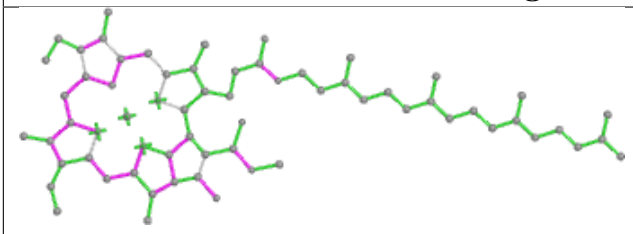


Torsions

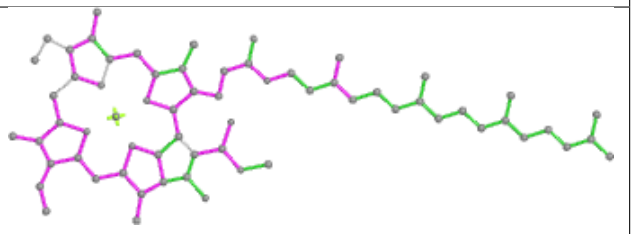


Rings

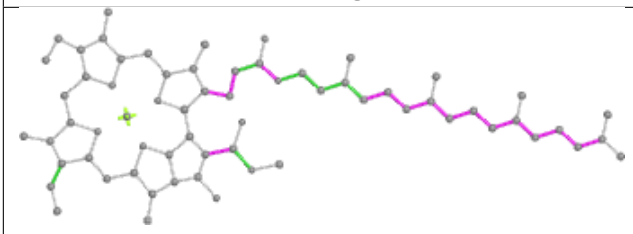
Ligand CLA A 820



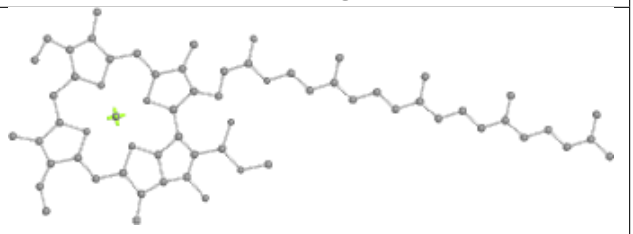
Bond lengths



Bond angles

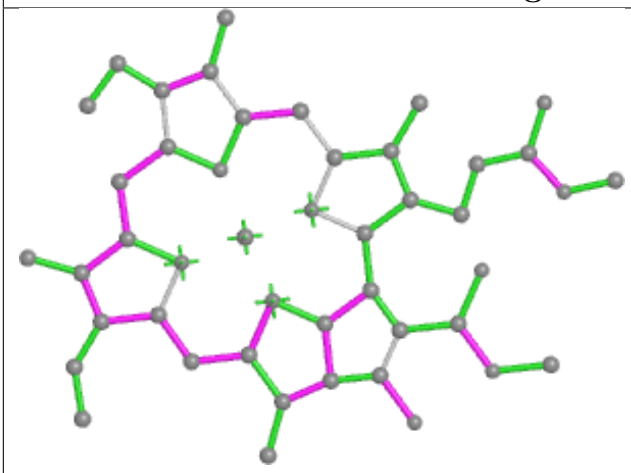


Torsions

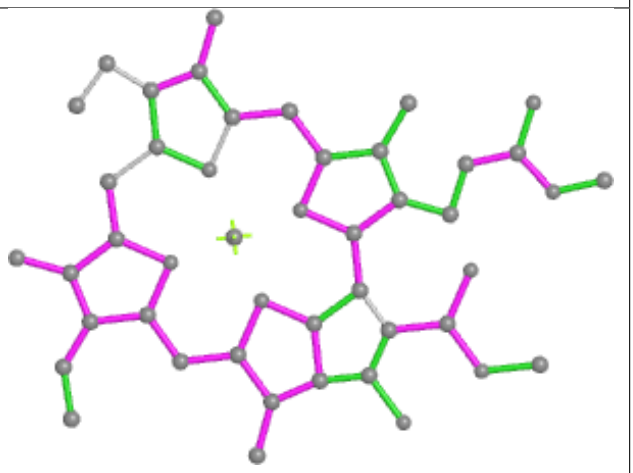


Rings

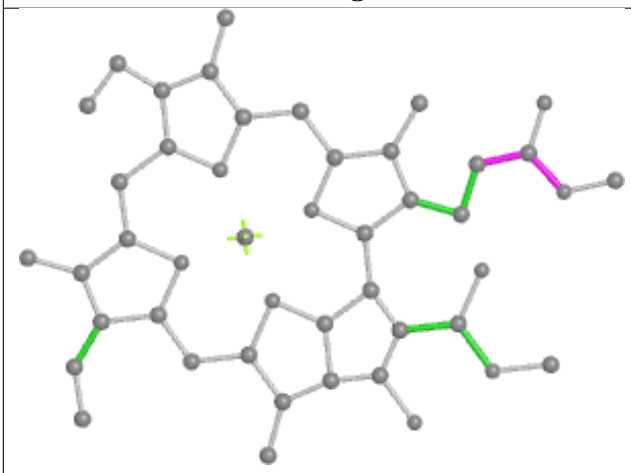
Ligand CLA B 821



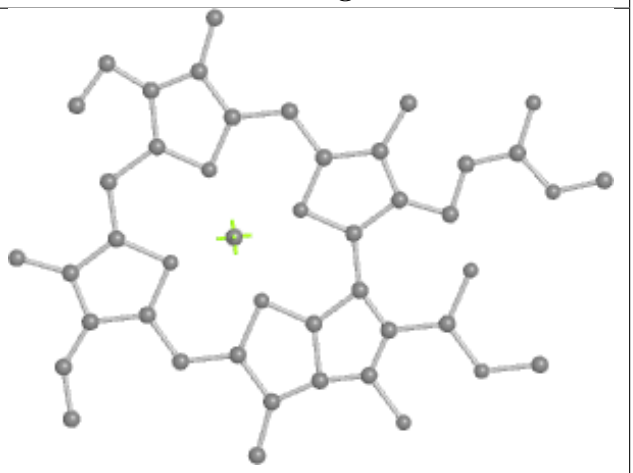
Bond lengths



Bond angles

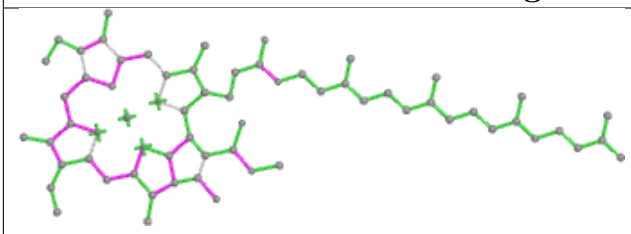


Torsions

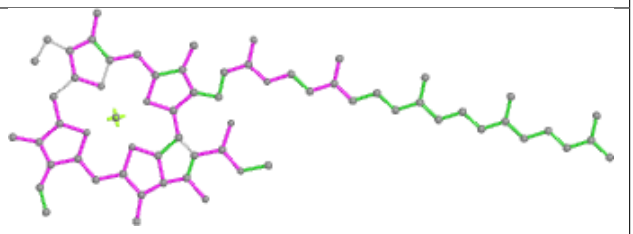


Rings

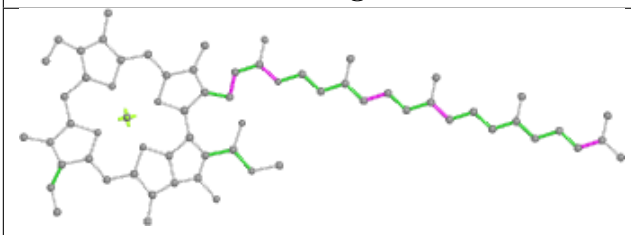
Ligand CLA A 838



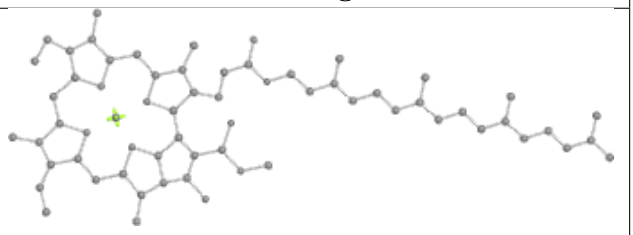
Bond lengths



Bond angles

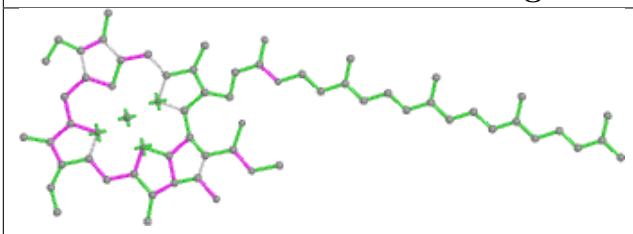


Torsions

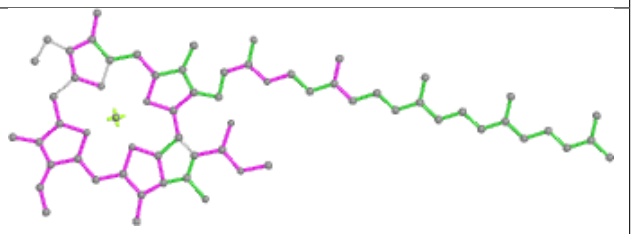


Rings

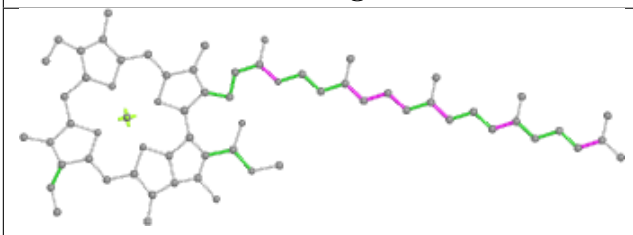
Ligand CLA B 830



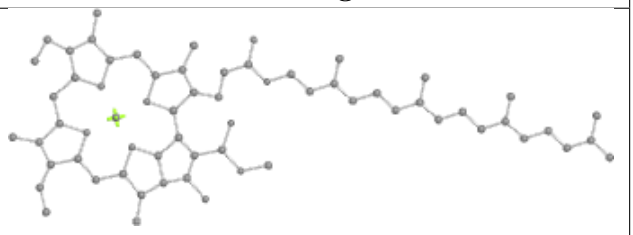
Bond lengths



Bond angles

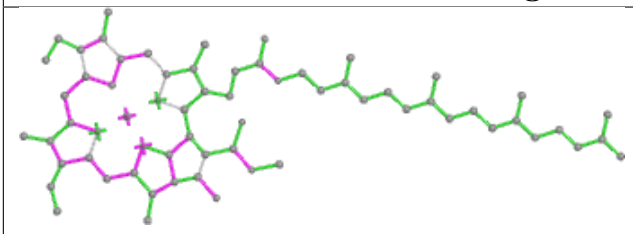


Torsions

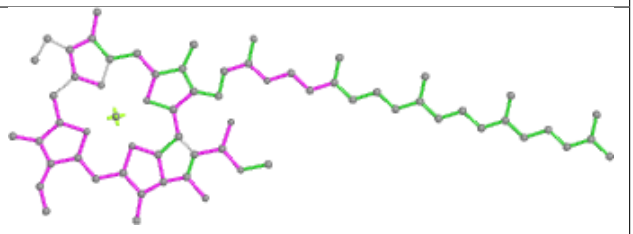


Rings

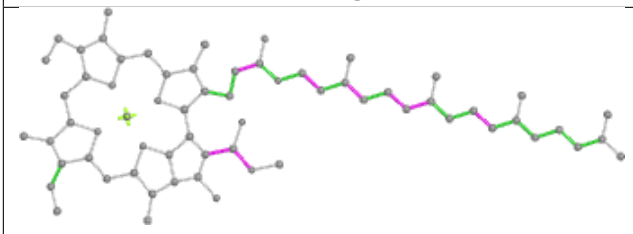
Ligand CLA A 804



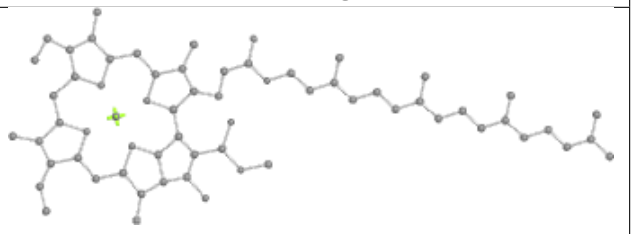
Bond lengths



Bond angles

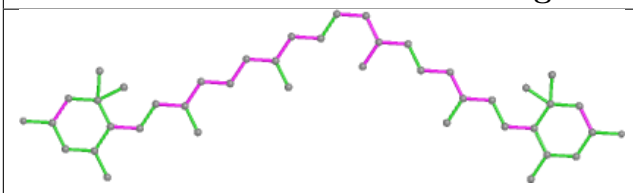


Torsions

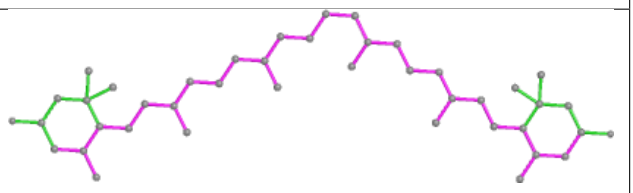


Rings

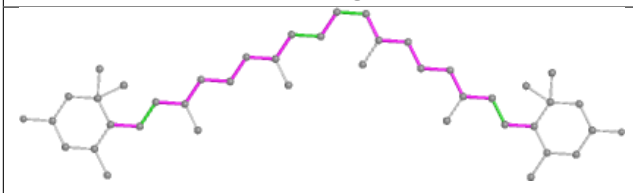
Ligand 5X6 1 316



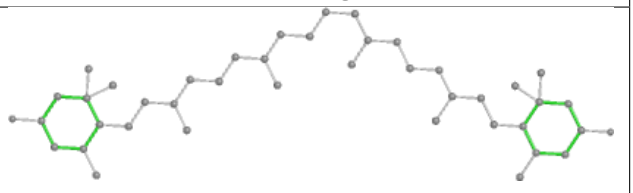
Bond lengths



Bond angles

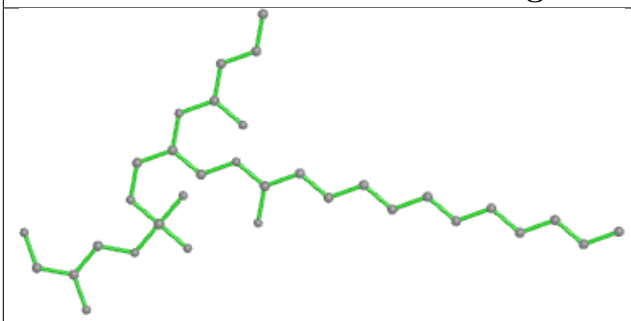


Torsions

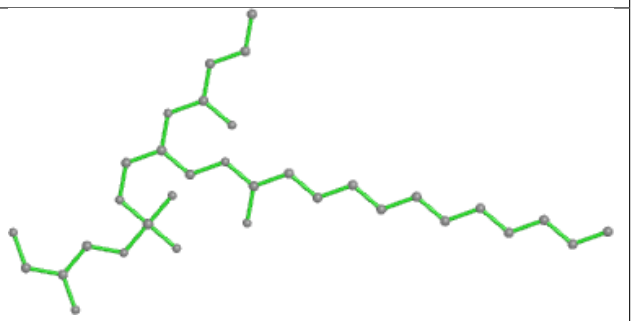


Rings

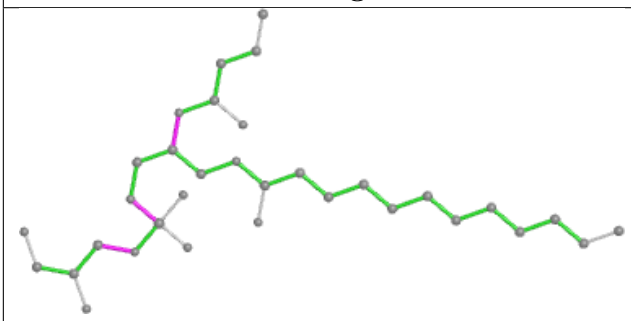
Ligand LHG J 106



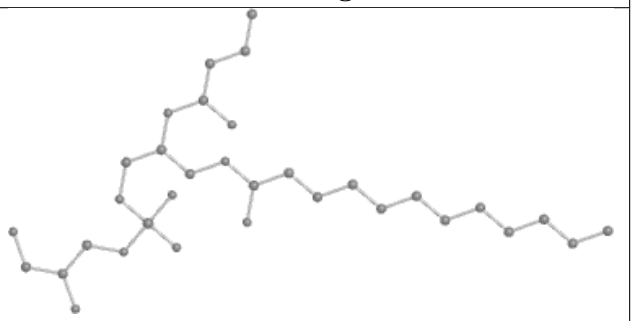
Bond lengths



Bond angles

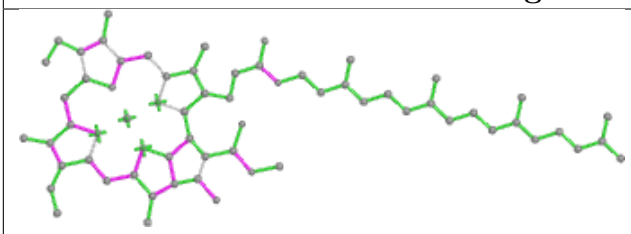


Torsions

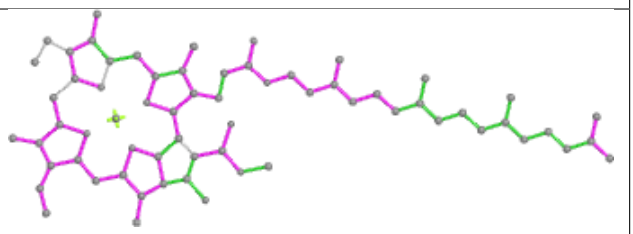


Rings

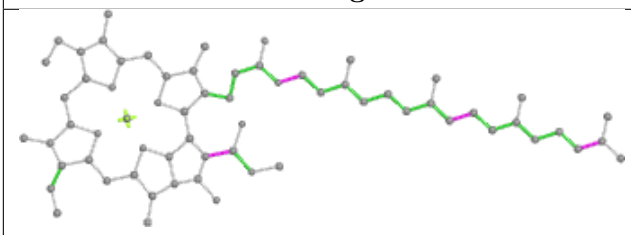
Ligand CLA B 803



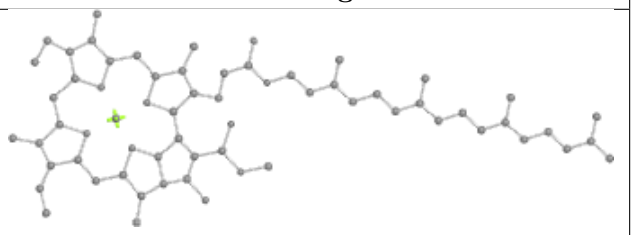
Bond lengths



Bond angles

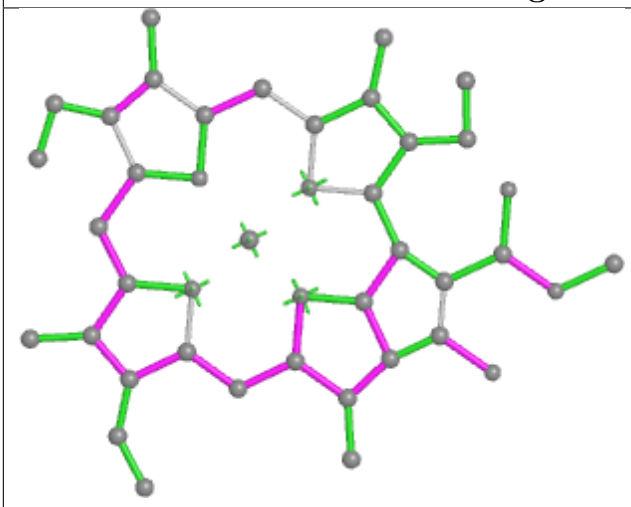


Torsions



Rings

Ligand CLA 2 310



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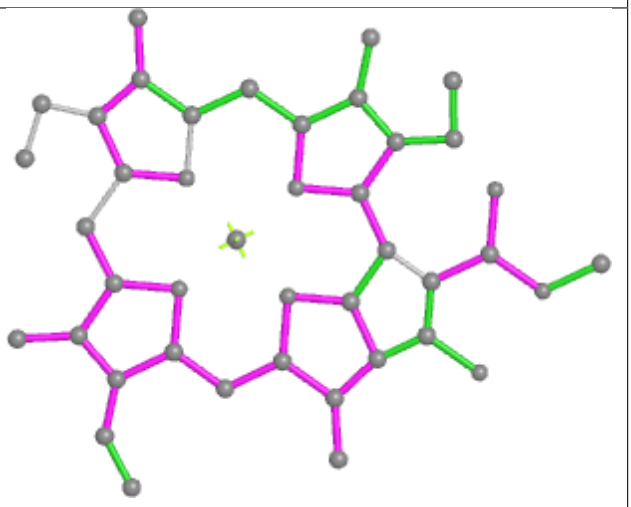
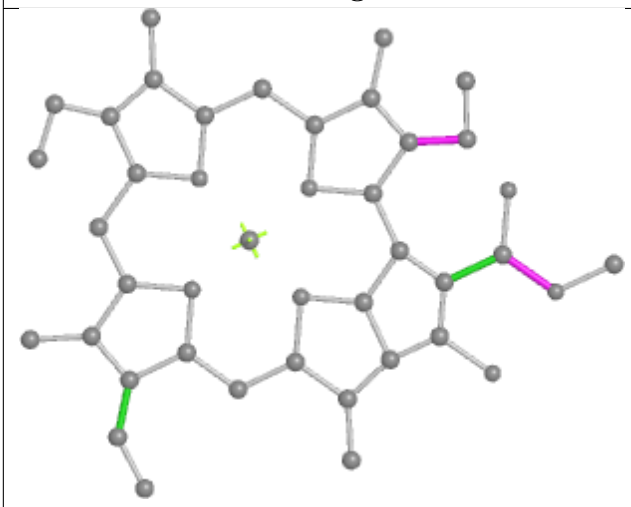
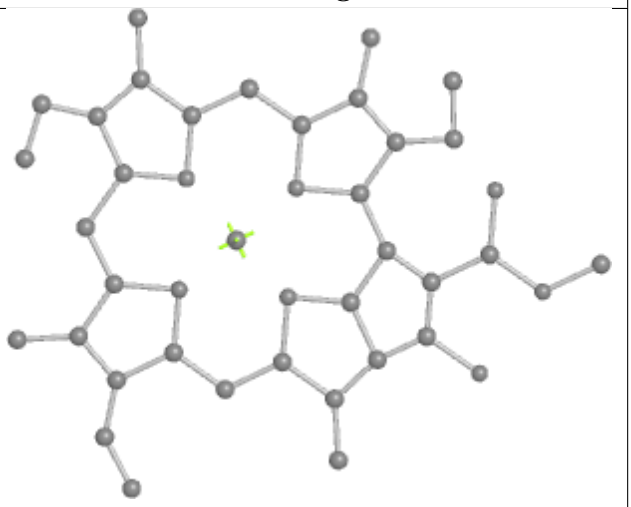


Bond angles

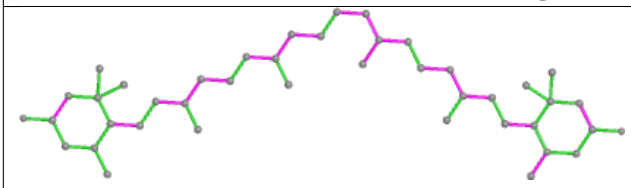


Torsions



Rings

Ligand 5X6 4 315



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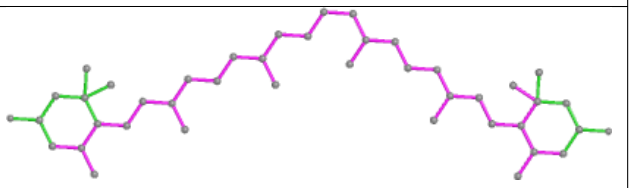
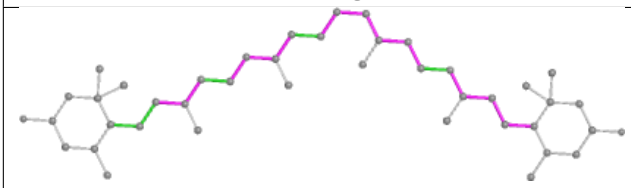
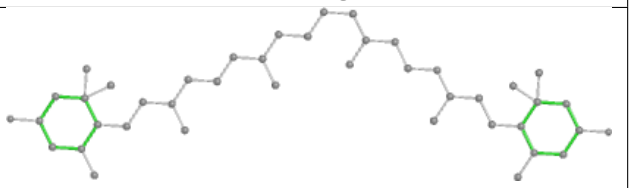


Bond angles

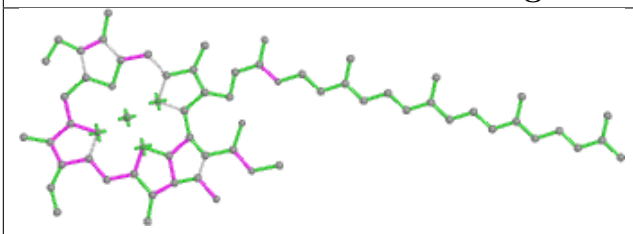


Torsions



Rings

Ligand CLA B 837



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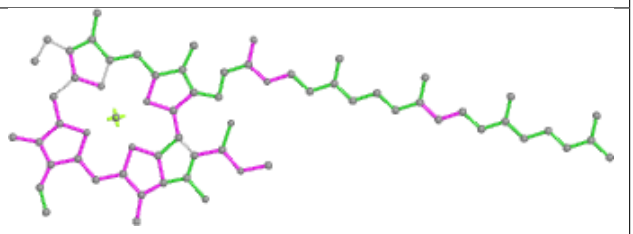
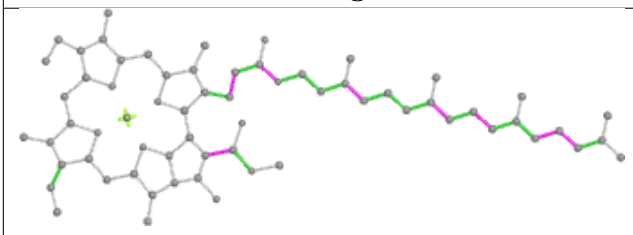
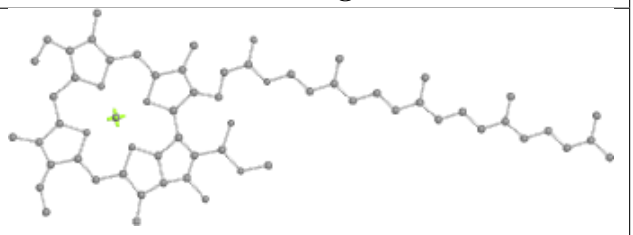


Bond angles

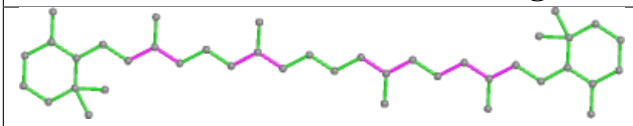


Torsions



Rings

Ligand BCR I 102



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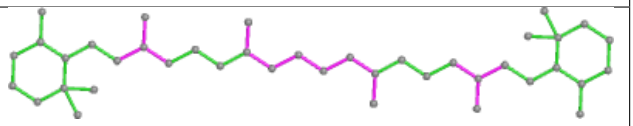
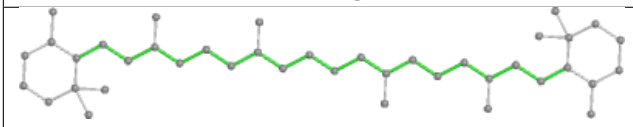


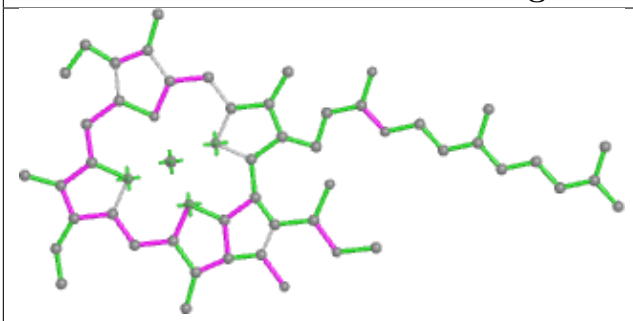
Bond angles



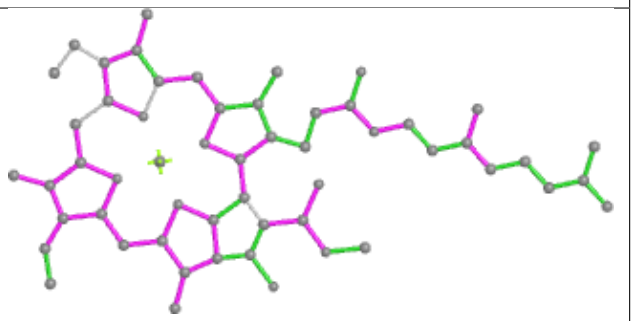
Torsions

Rings

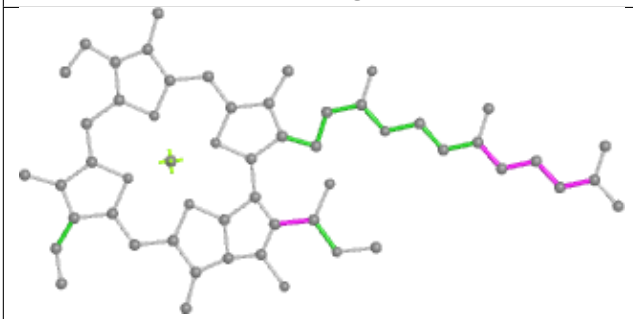
Ligand CLA 6 310



Bond lengths



Bond angles



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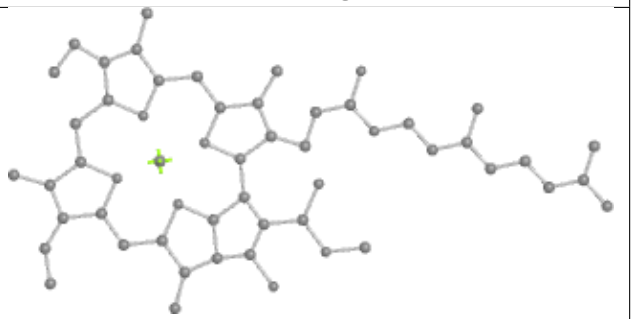
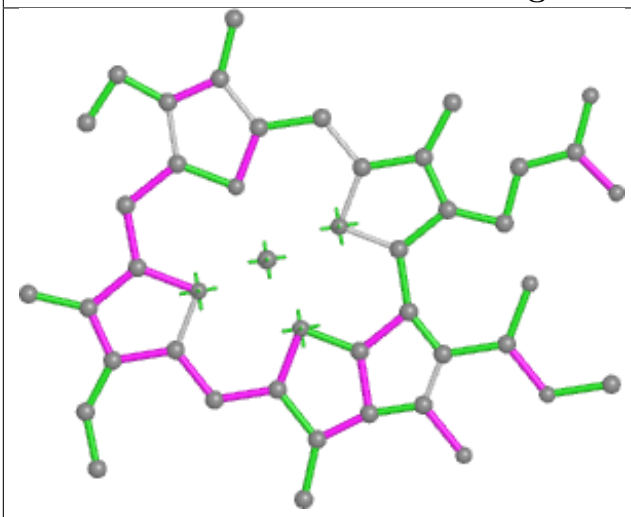


Rings

Ligand CLA 6 309



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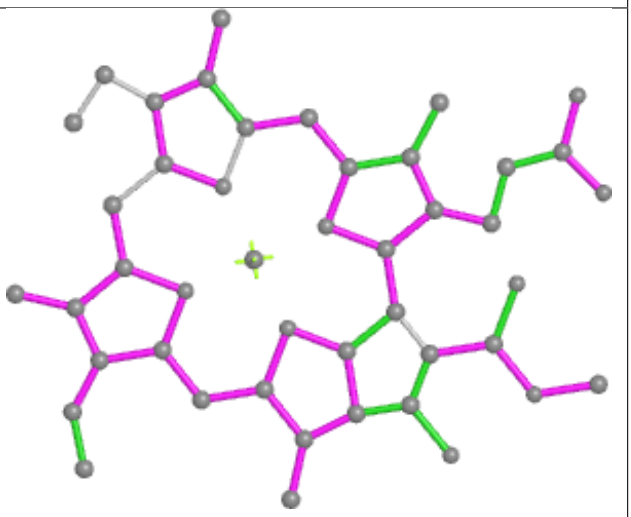
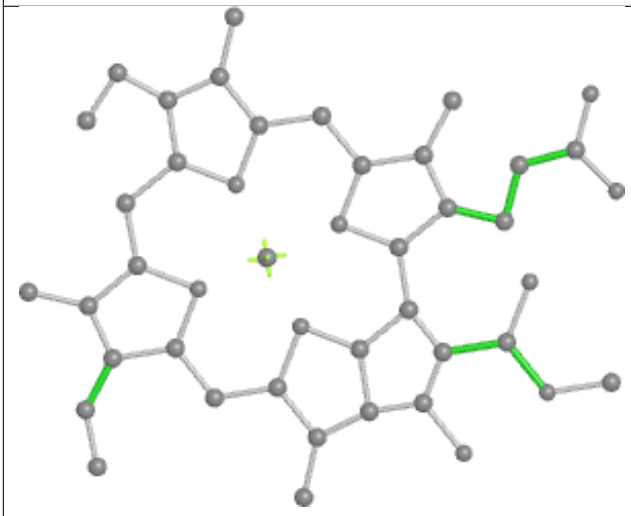
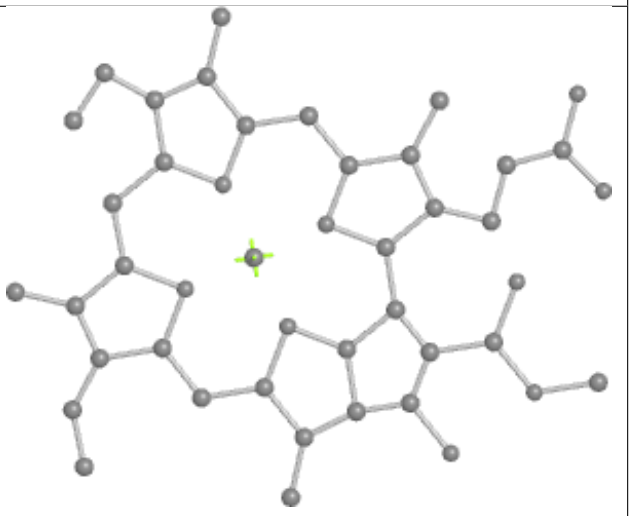


Bond angles

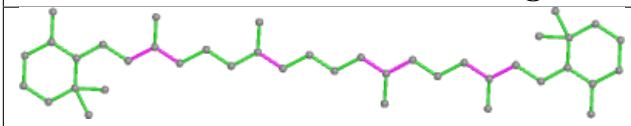


Torsions

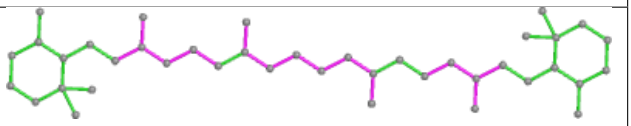


Rings

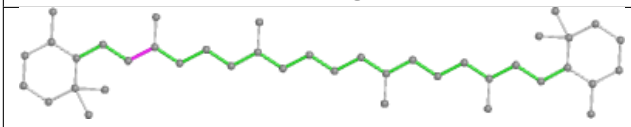
Ligand BCR Z 205



Bond lengths



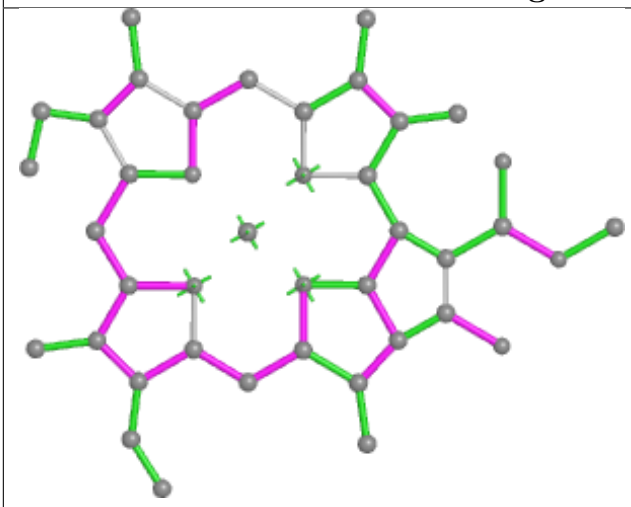
Bond angles



Torsions

Rings

Ligand CLA 5 308



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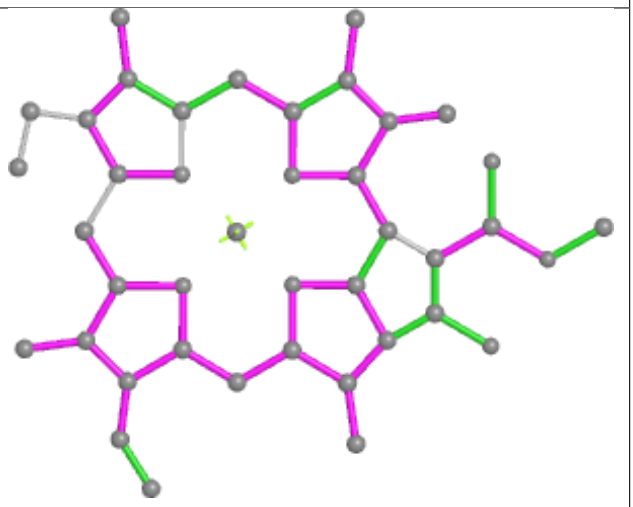
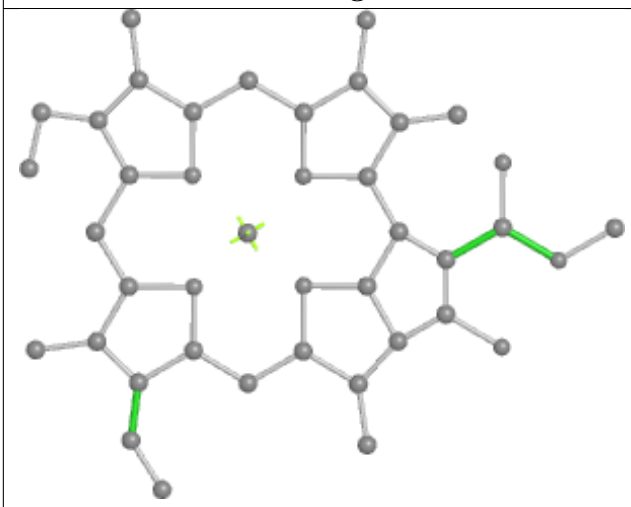
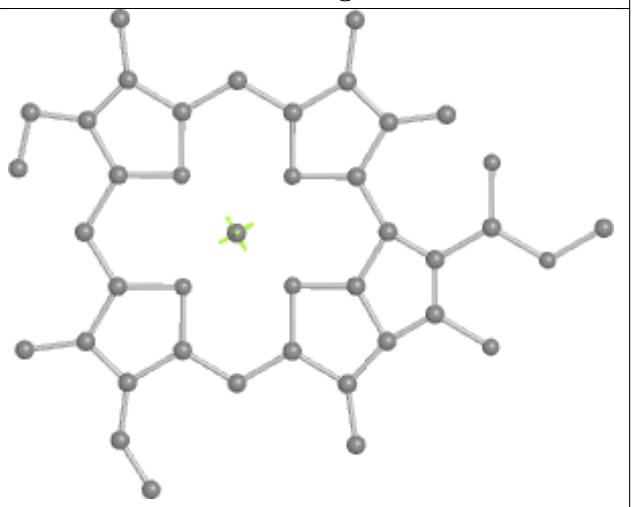


Bond angles

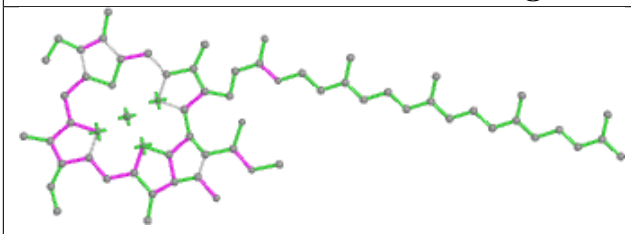


Torsions

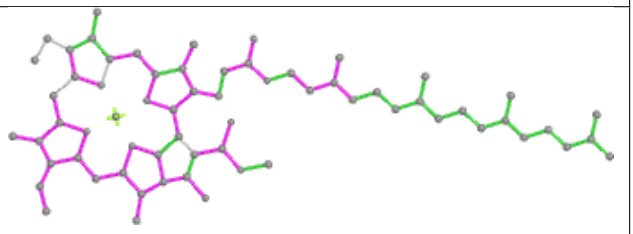


Rings

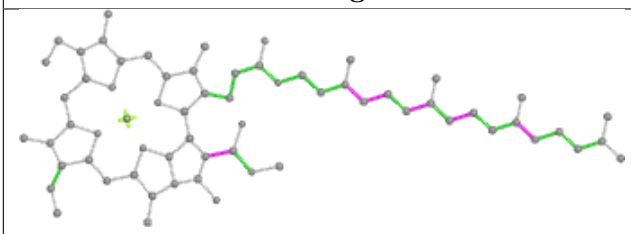
Ligand CLA B 808



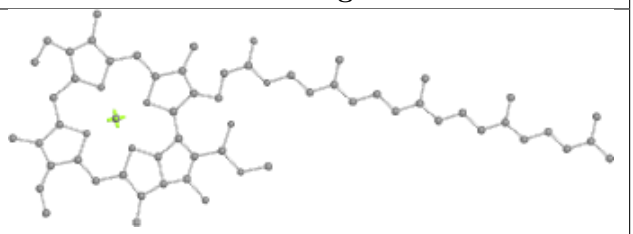
Bond lengths



Bond angles

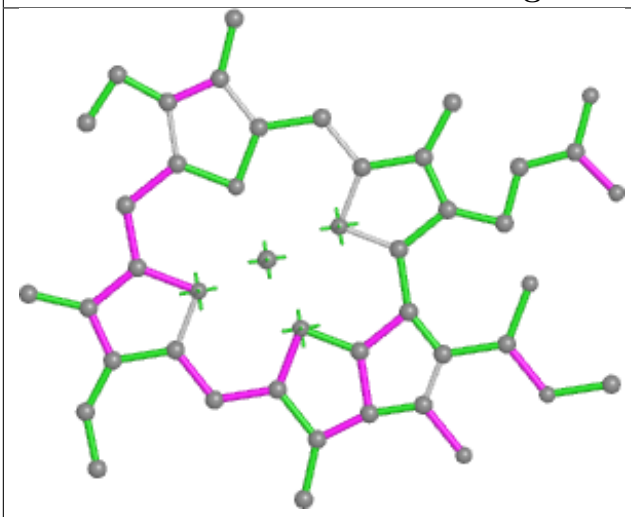


Torsions

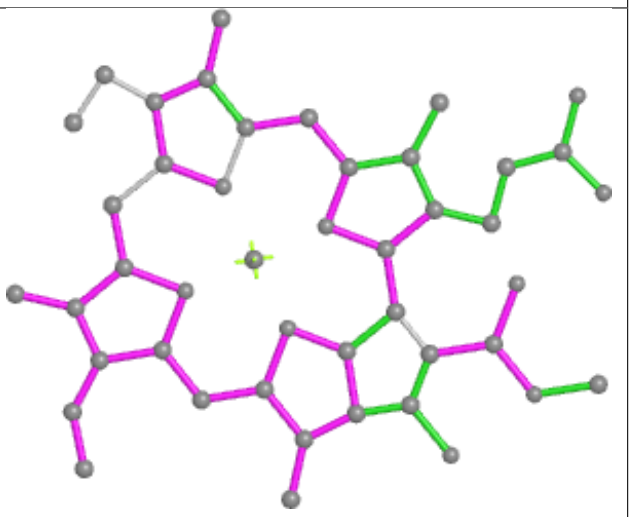


Rings

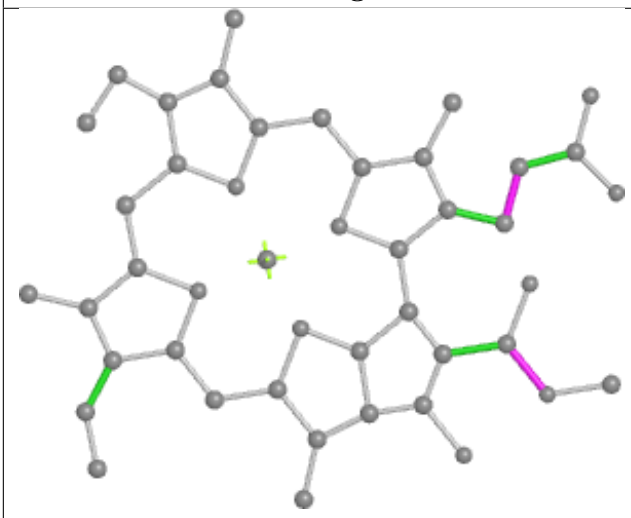
Ligand CLA A 821



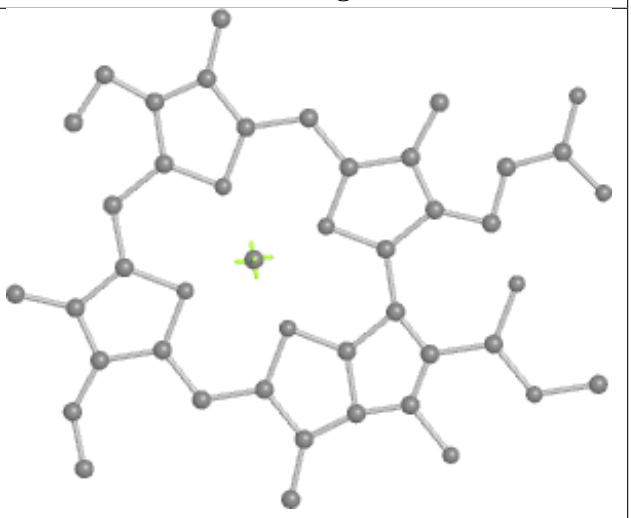
Bond lengths



Bond angles

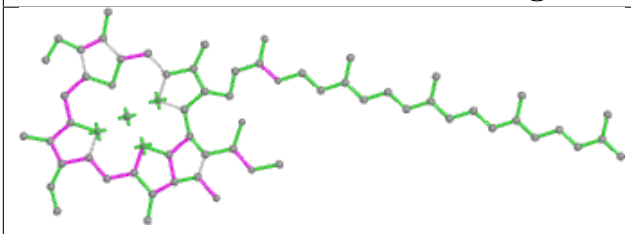


Torsions



Rings

Ligand CLA 1 303



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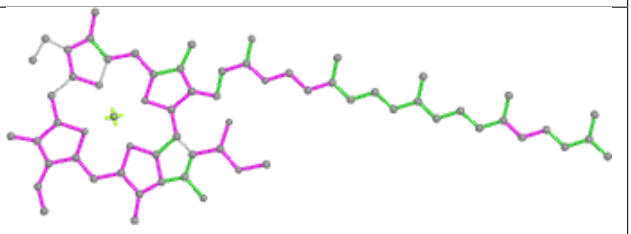
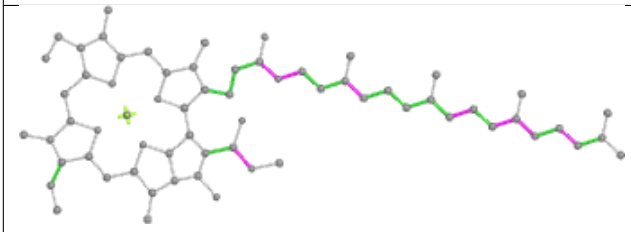
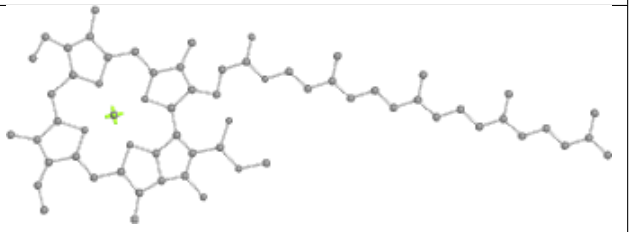


Bond angles

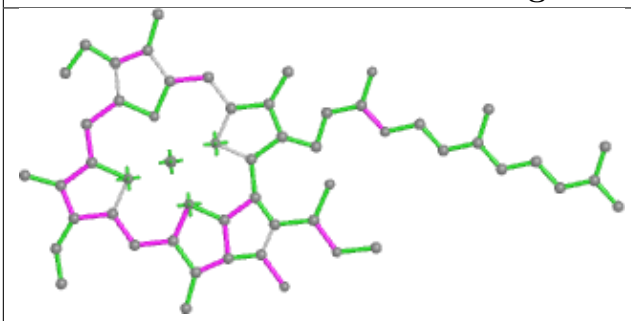


Torsions



Rings

Ligand CLA 7 309



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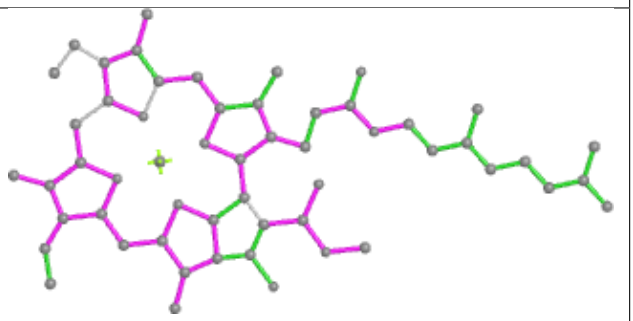
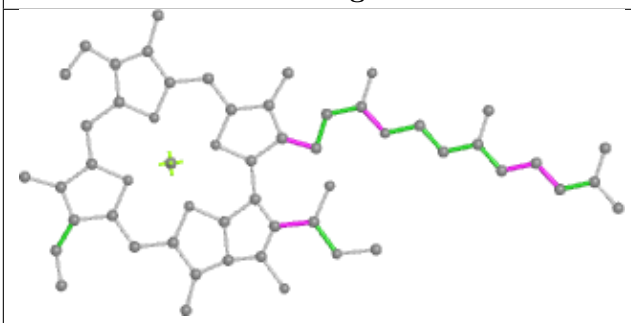
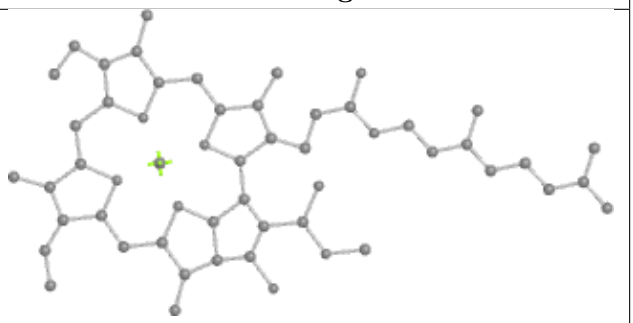


Bond angles

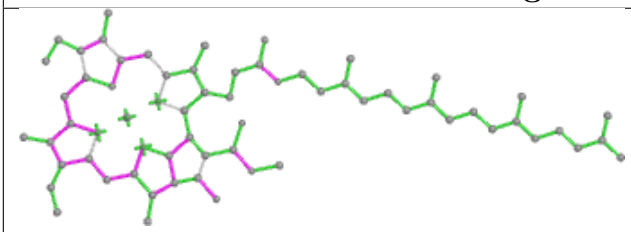


Torsions



Rings

Ligand CLA A 833



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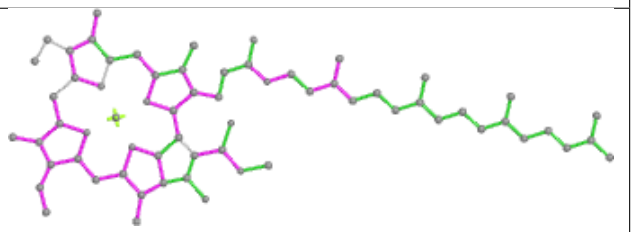
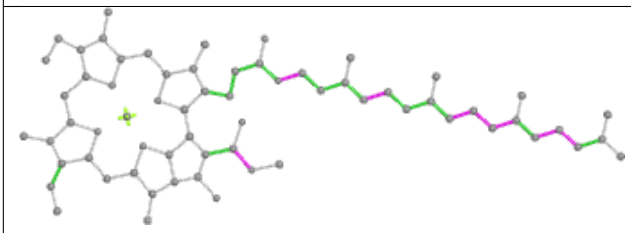
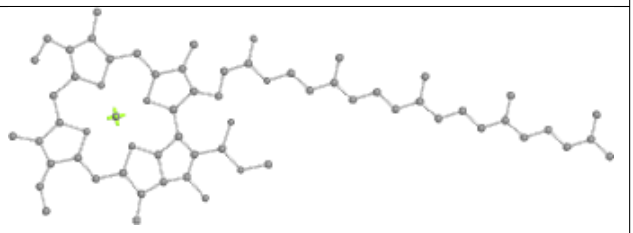


Bond angles

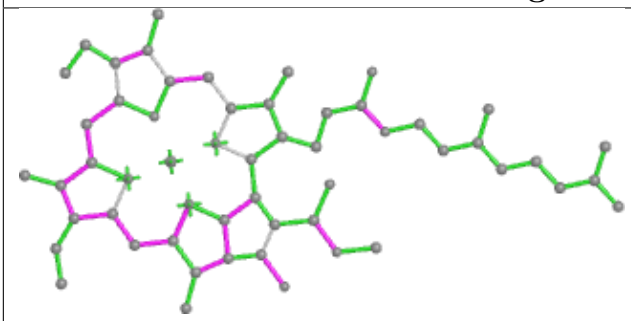


Torsions

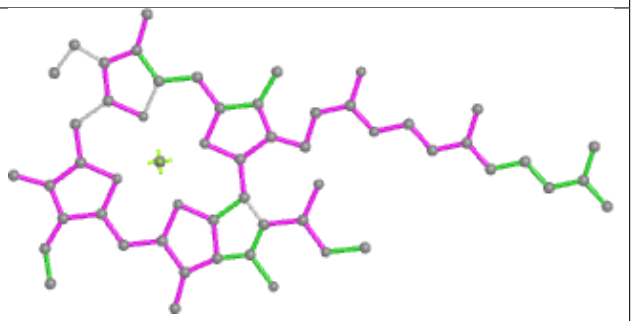


Rings

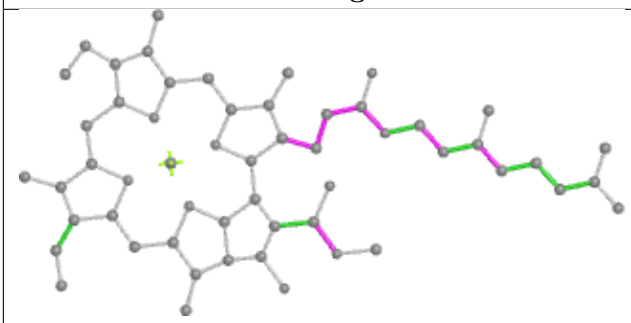
Ligand CLA 1 307



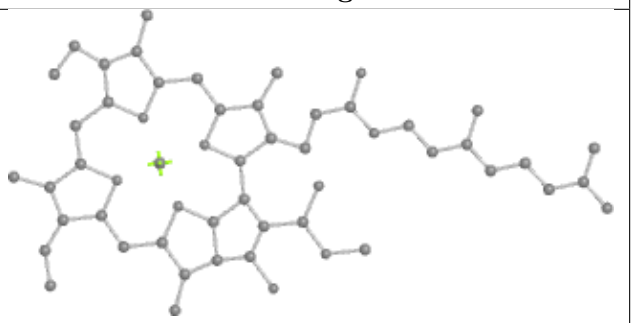
Bond lengths



Bond angles

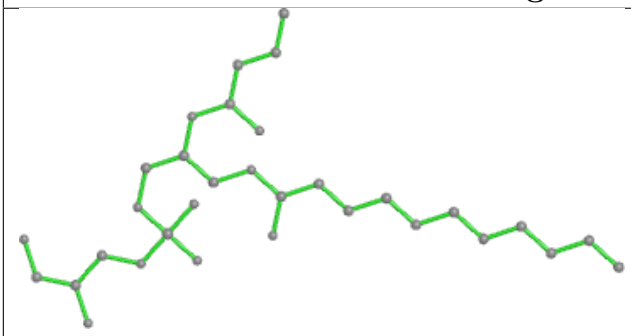


Torsions

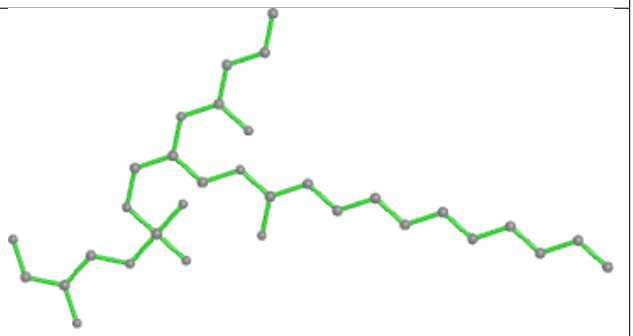


Rings

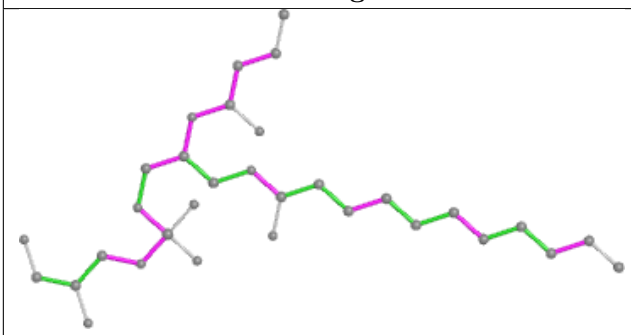
Ligand LHG 2 315



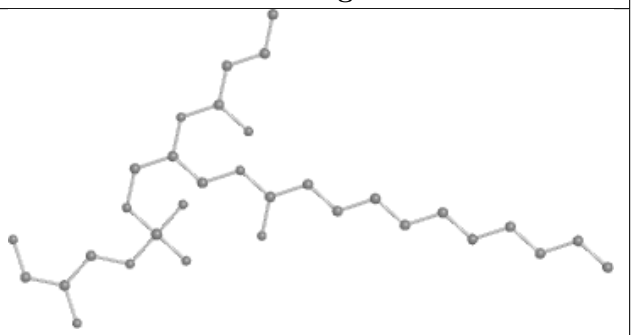
Bond lengths



Bond angles

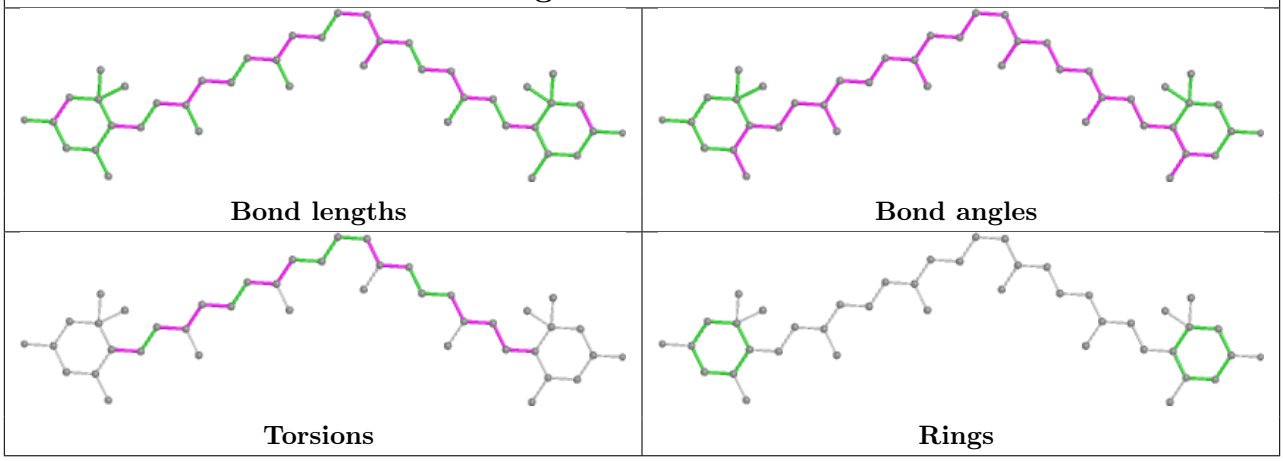


Torsions

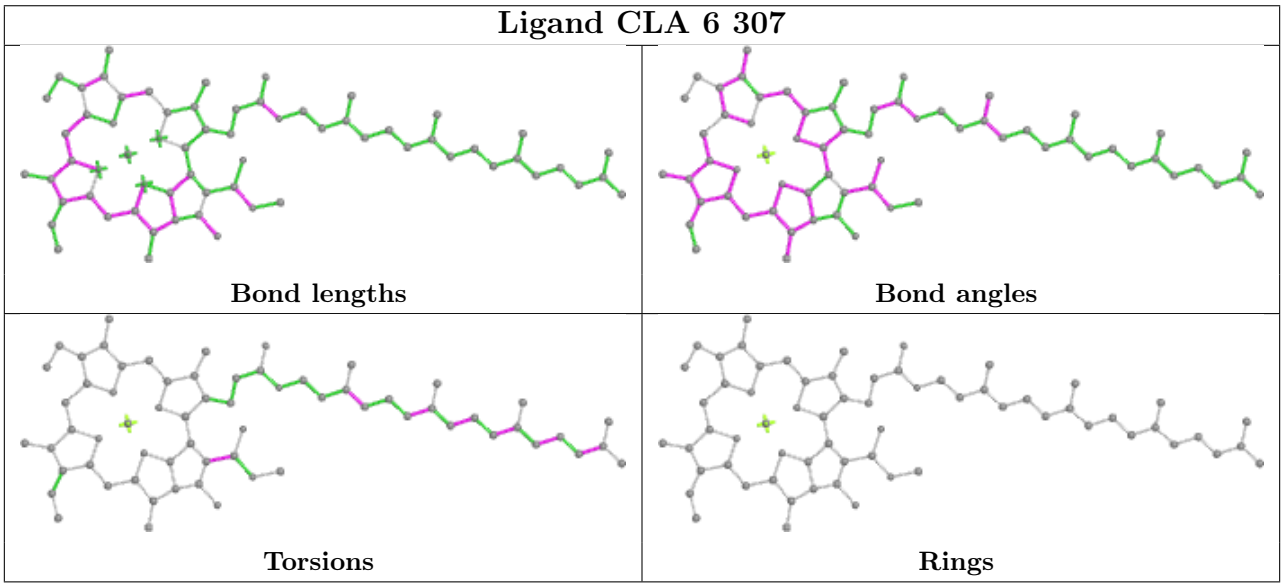


Rings

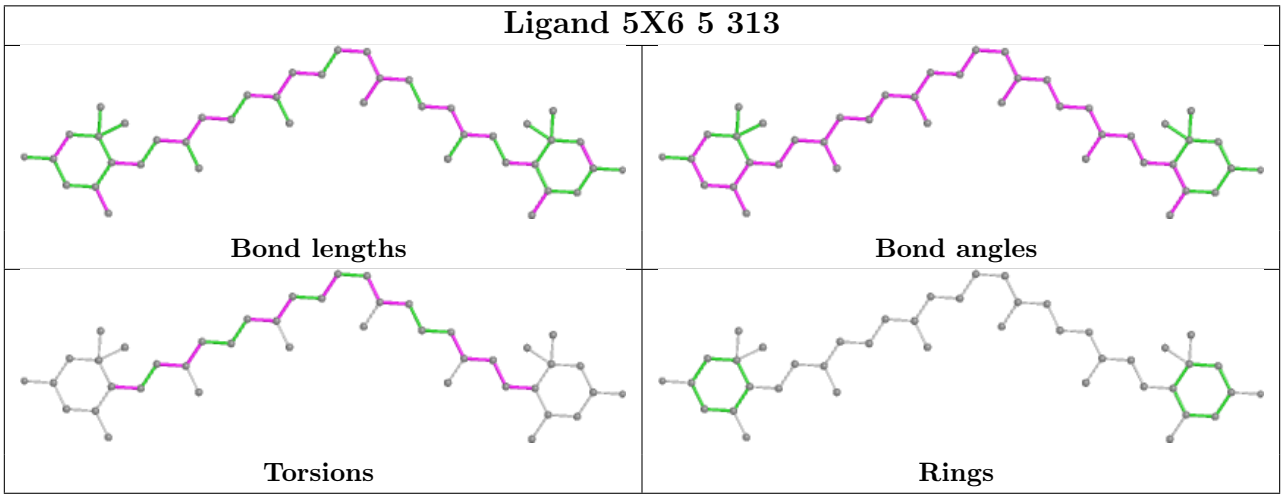
Ligand 5X6 1 314



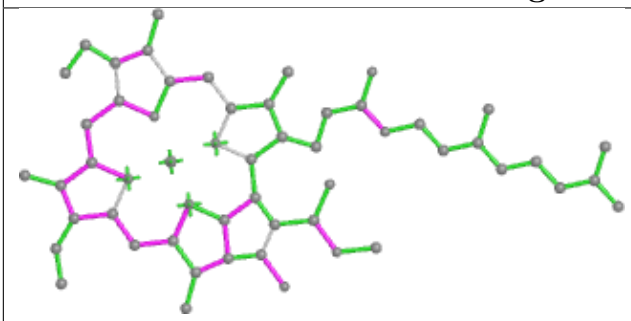
Ligand CLA 6 307



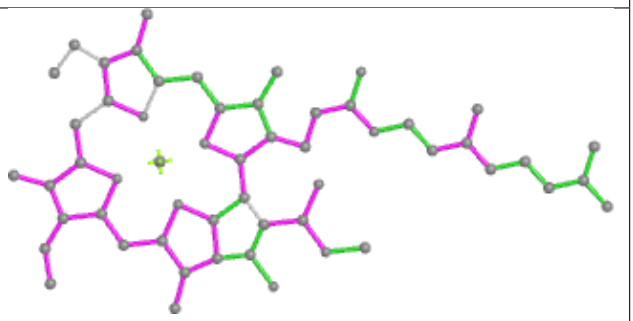
Ligand 5X6 5 313



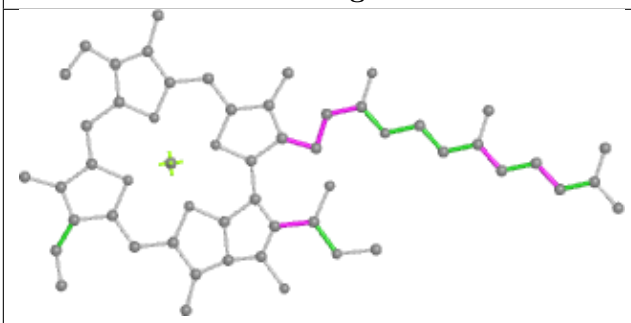
Ligand CLA 4 305



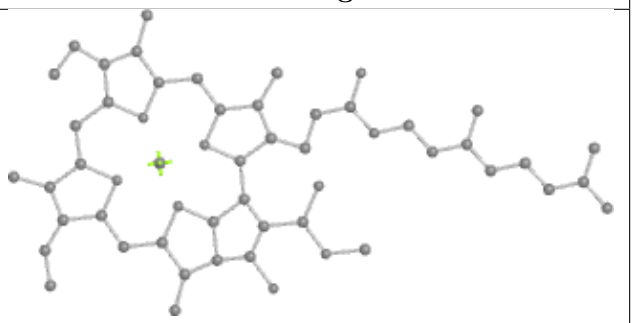
Bond lengths



Bond angles

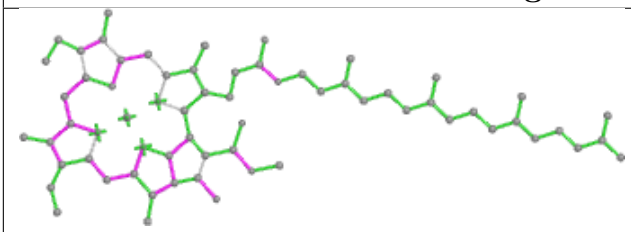


Torsions

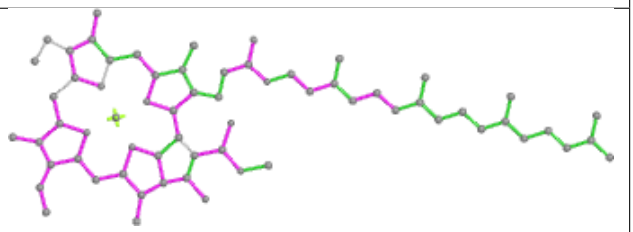


Rings

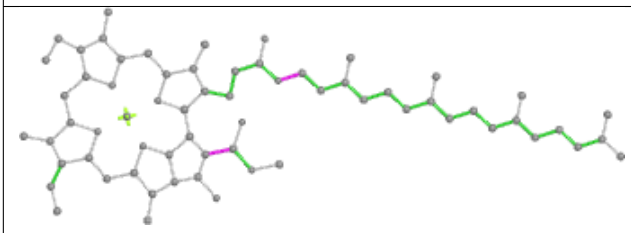
Ligand CLA B 826



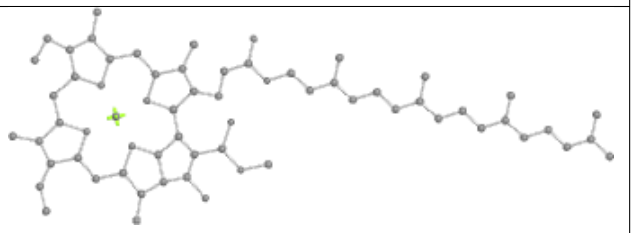
Bond lengths



Bond angles

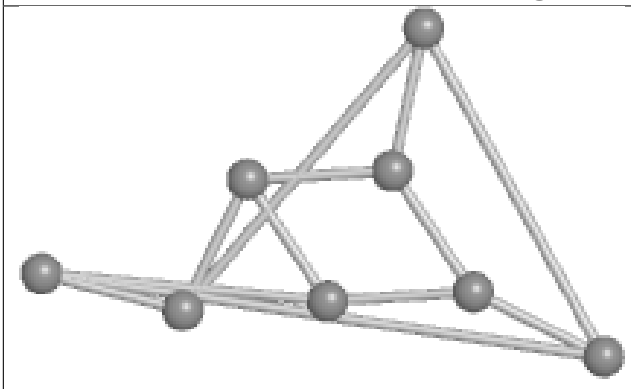


Torsions

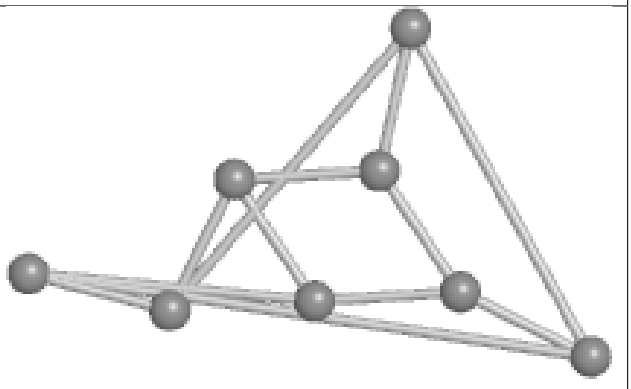


Rings

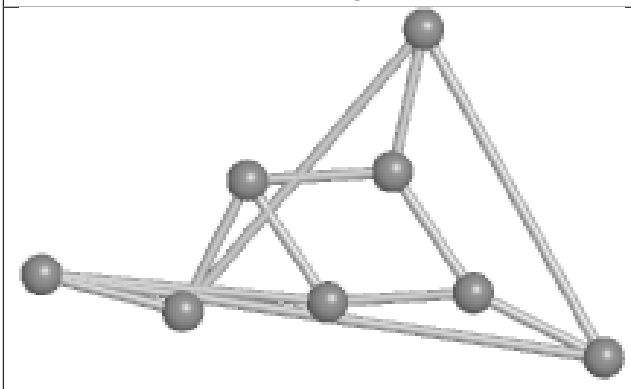
Ligand SF4 A 847



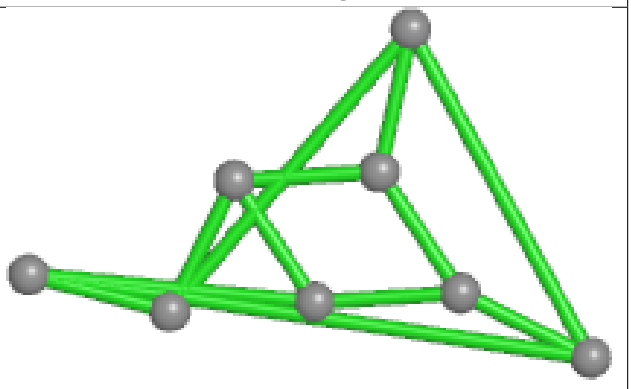
Bond lengths



Bond angles

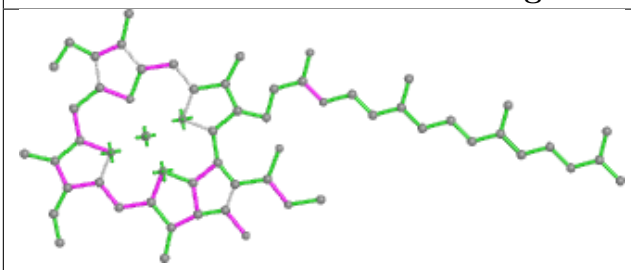


Torsions

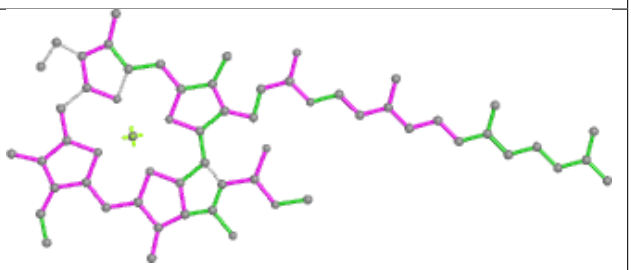


Rings

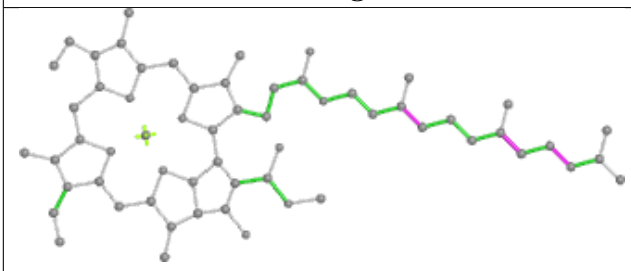
Ligand CLA B 818



Bond lengths



Bond angles



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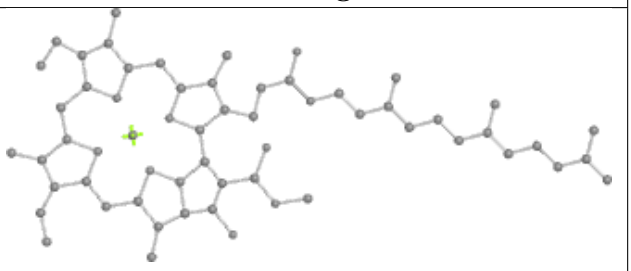
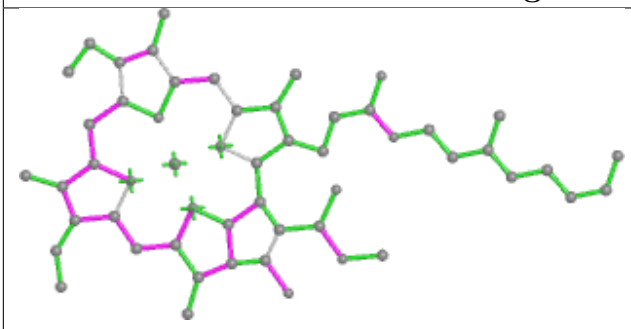
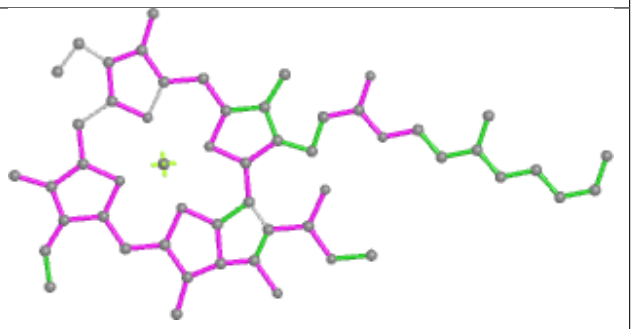


Rings

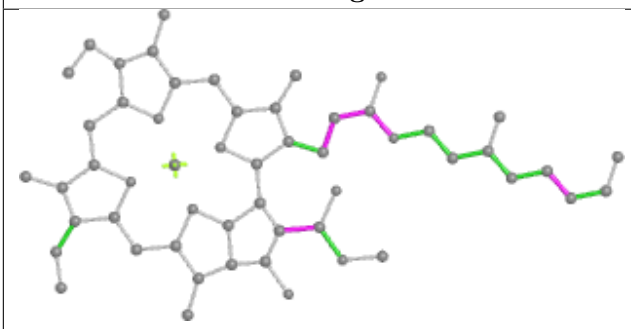
Ligand CLA A 810



Bond lengths



Bond angles



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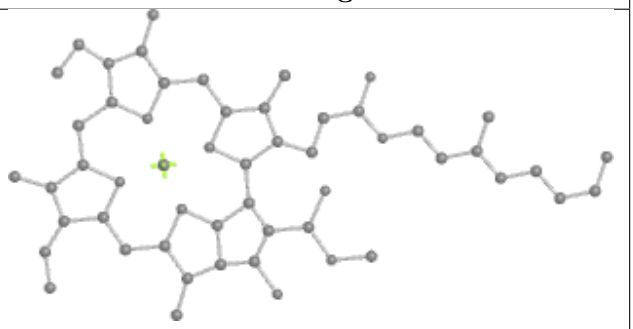
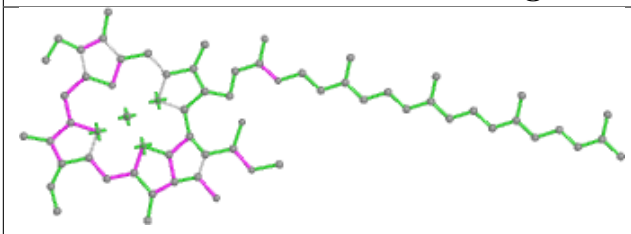
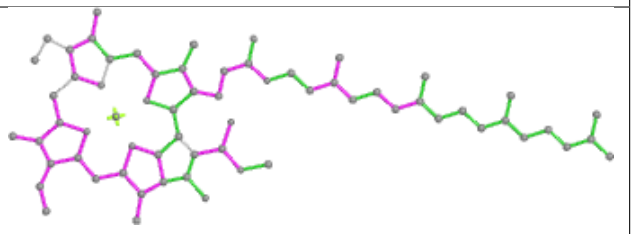


Rings

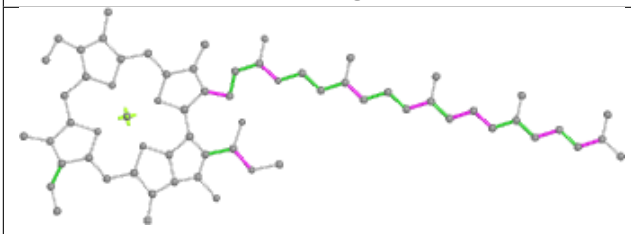
Ligand CLA B 804



Bond lengths



Bond angles



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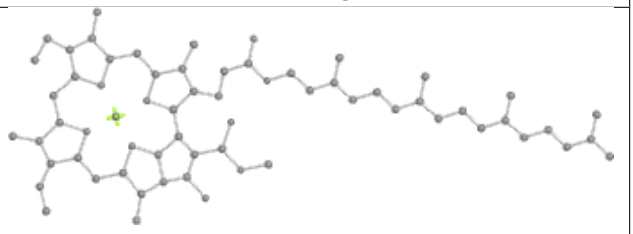
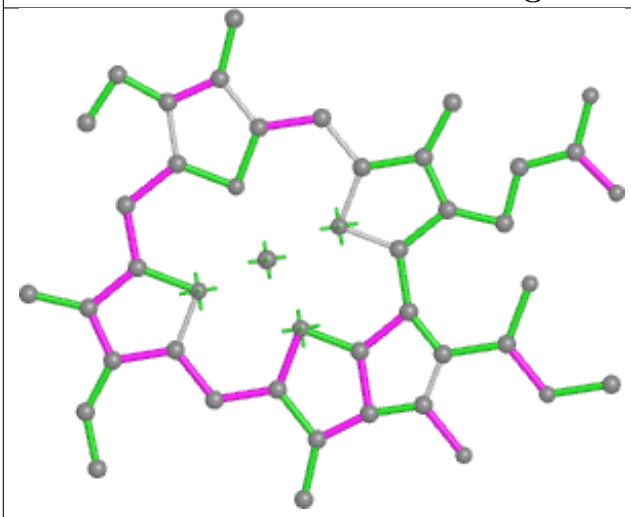
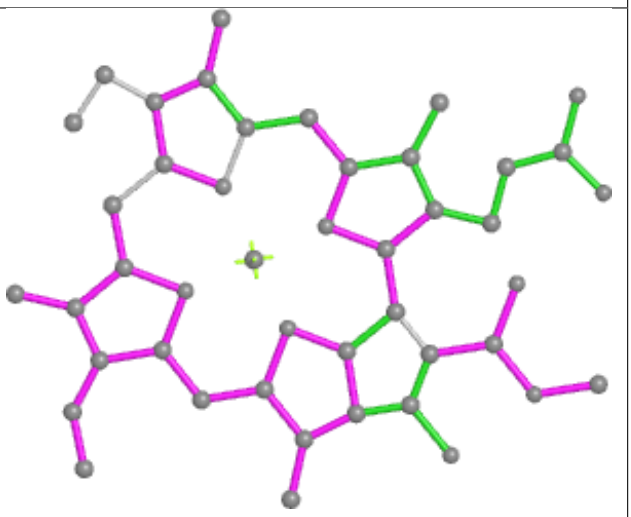


Rings

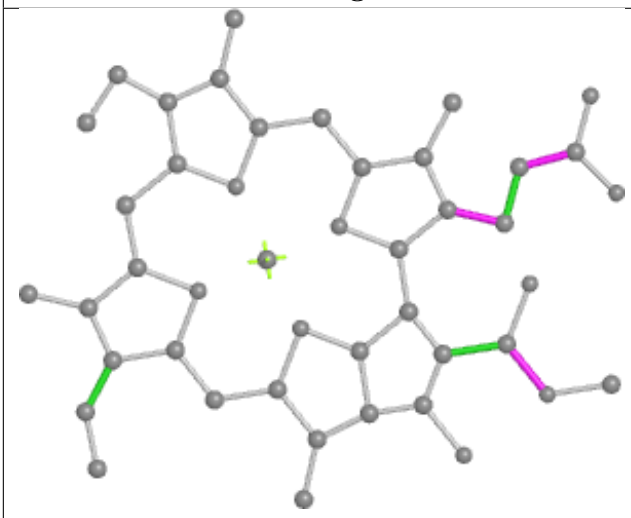
Ligand CLA B 850



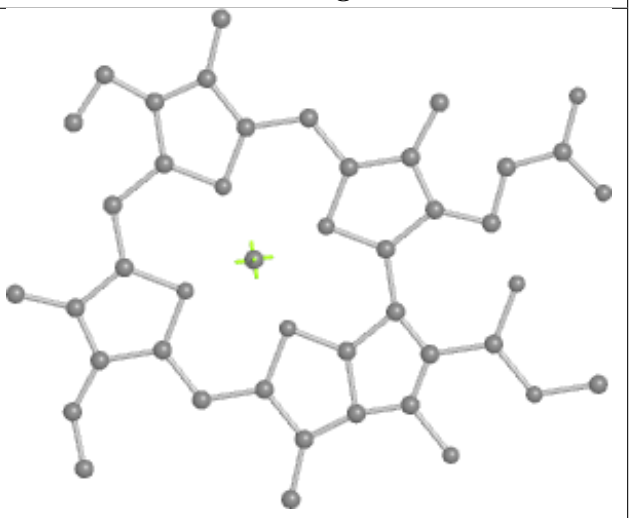
Bond lengths



Bond angles

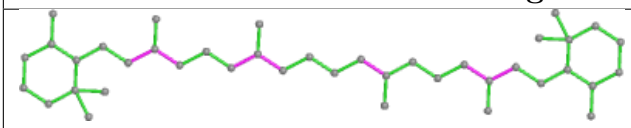


Torsions

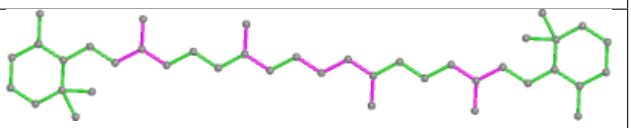


Rings

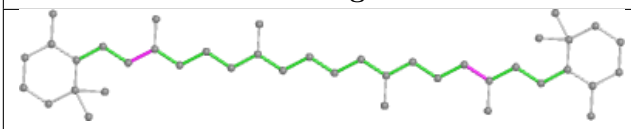
Ligand BCR 2 301



Bond lengths



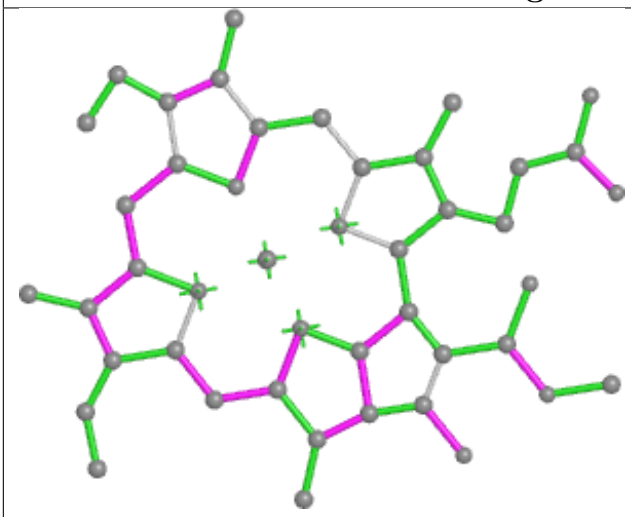
Bond angles



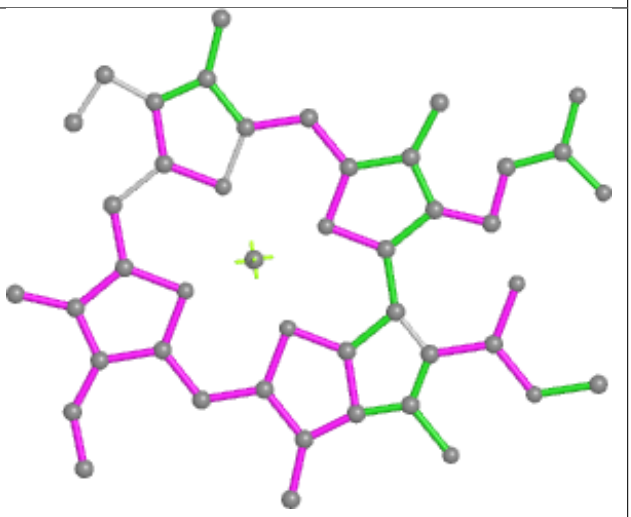
Torsions

Rings

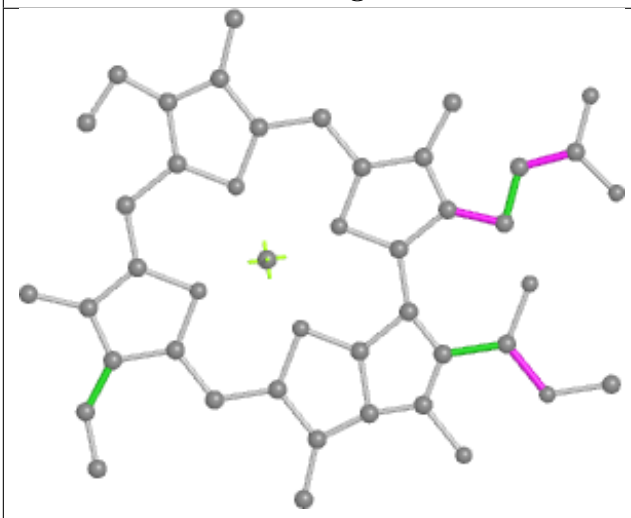
Ligand CLA Z 201



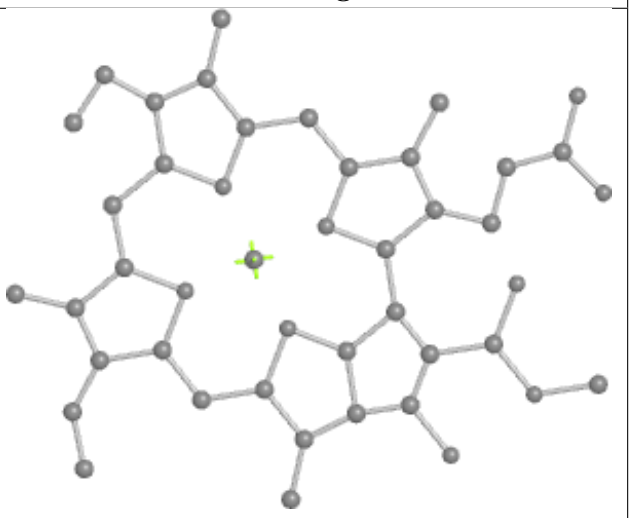
Bond lengths



Bond angles

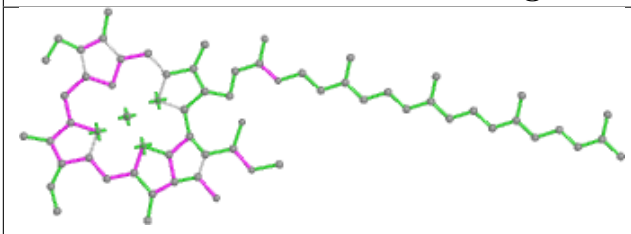


Torsions

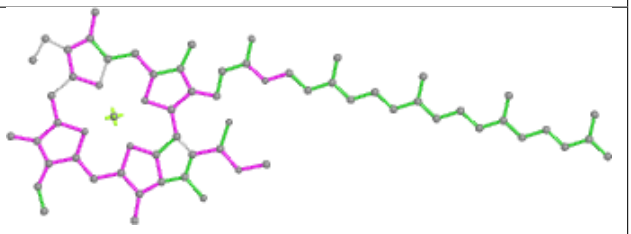


Rings

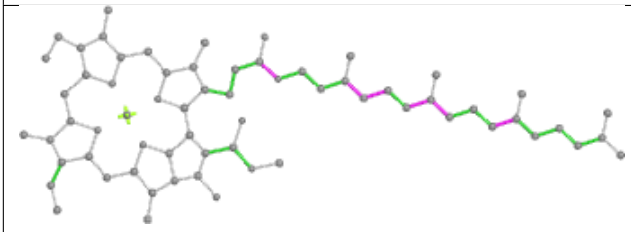
Ligand CLA A 819



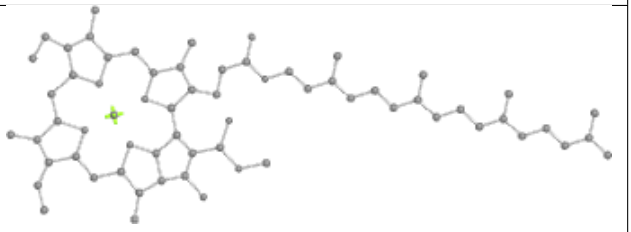
Bond lengths



Bond angles

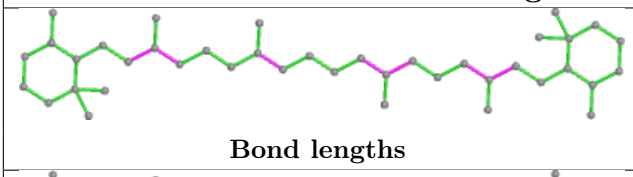


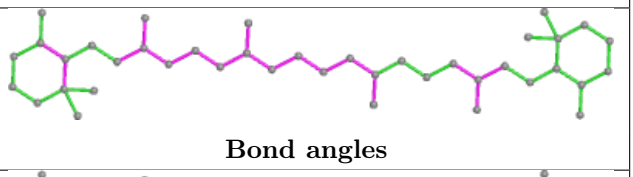
Torsions

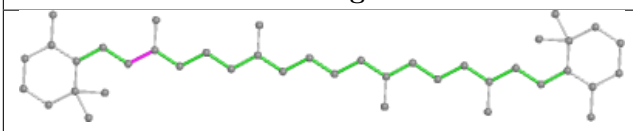


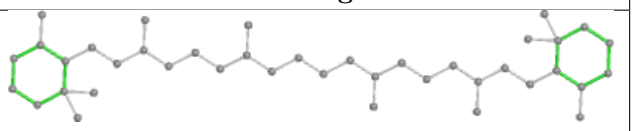
Rings

Ligand BCR L 206

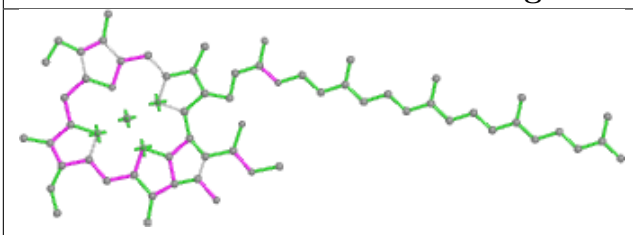

Bond lengths

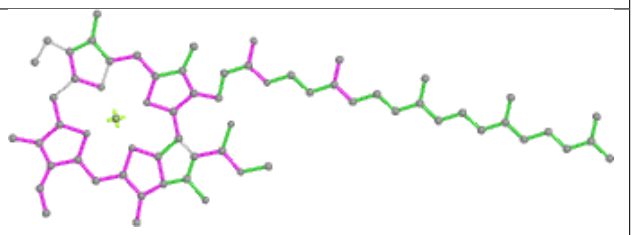

Bond angles

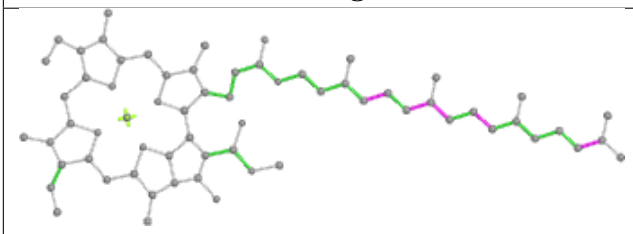

Torsions

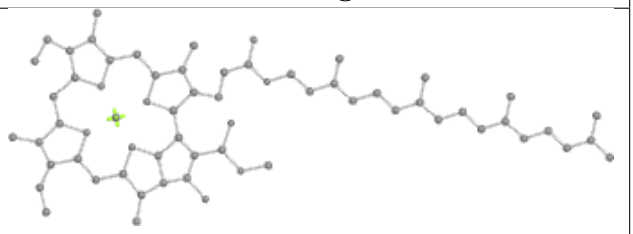

Rings

Ligand CLA B 833

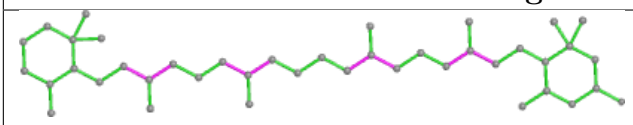

Bond lengths

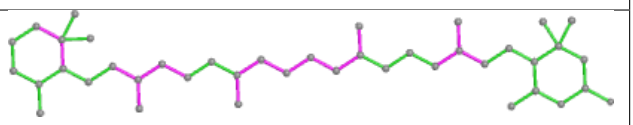

Bond angles

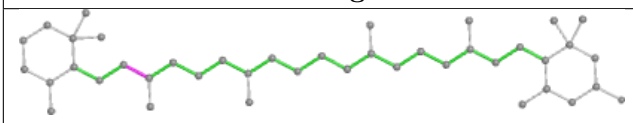

Torsions

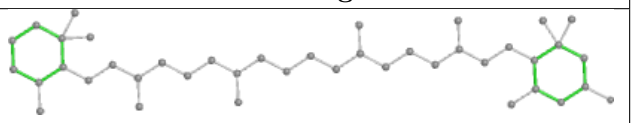

Rings

Ligand RRX 6 318

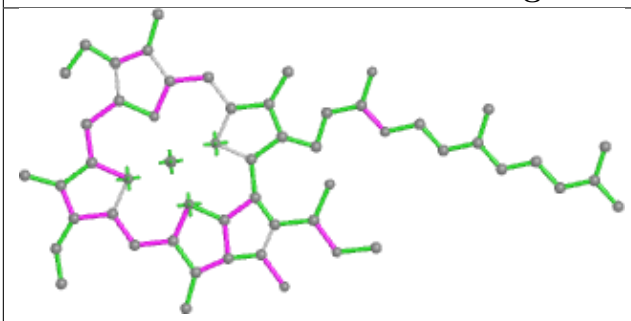

Bond lengths


Bond angles

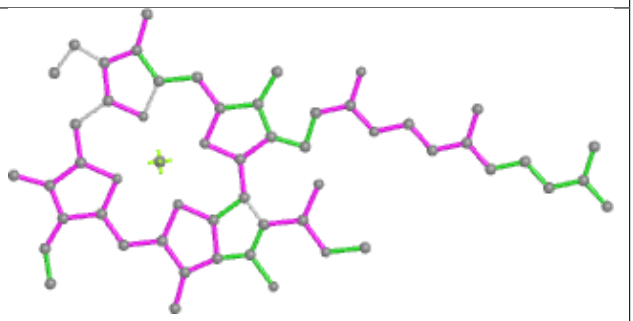

Torsions


Rings

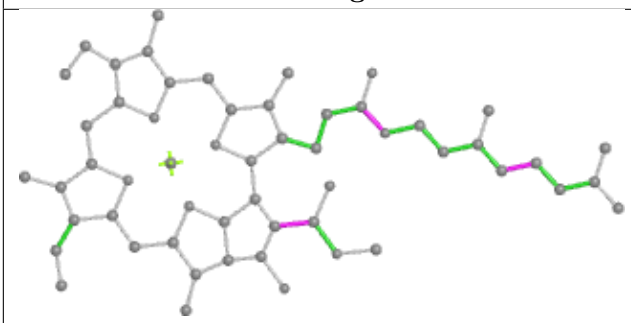
Ligand CLA A 822



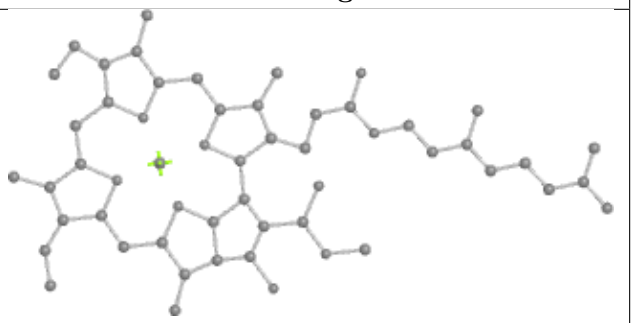
Bond lengths



Bond angles

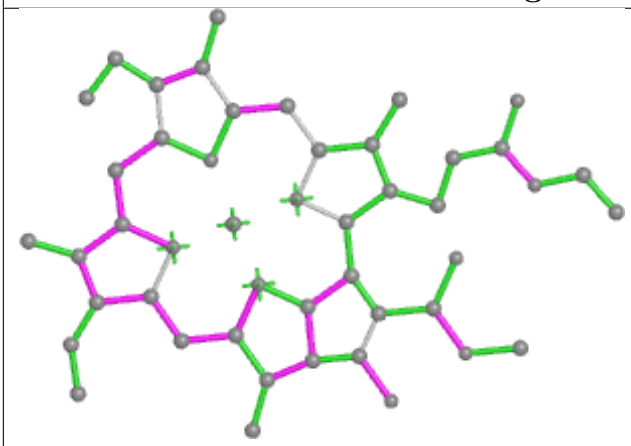


Torsions

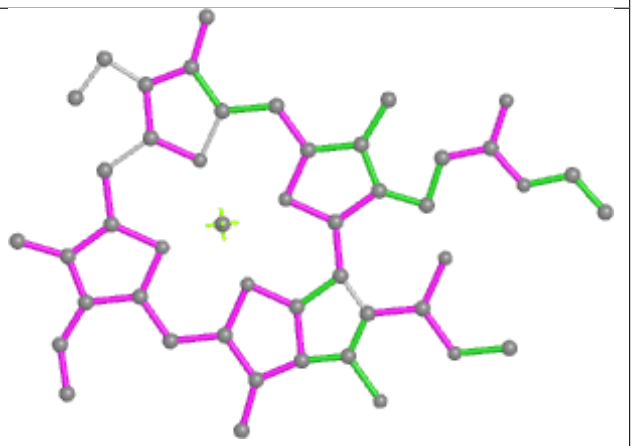


Rings

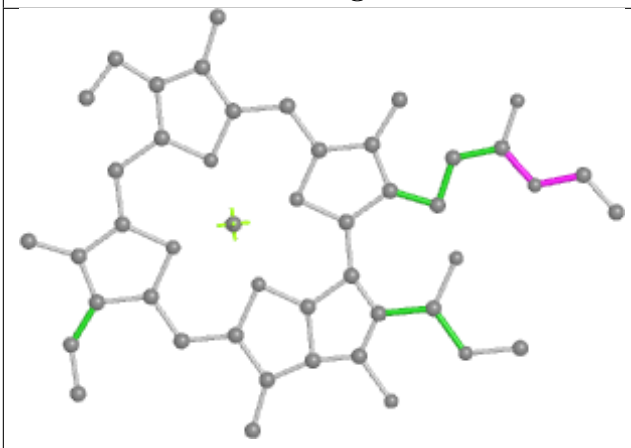
Ligand CLA B 836



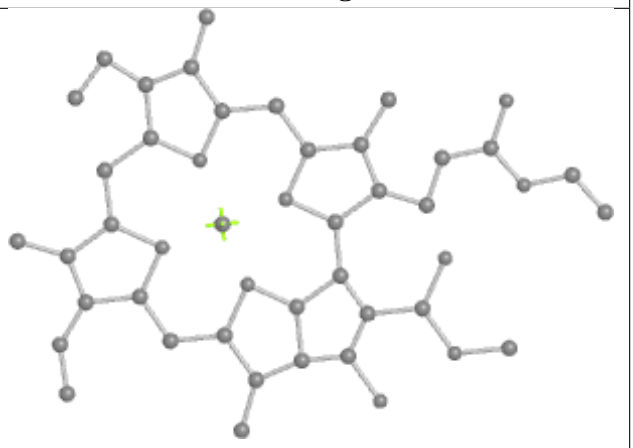
Bond lengths



Bond angles

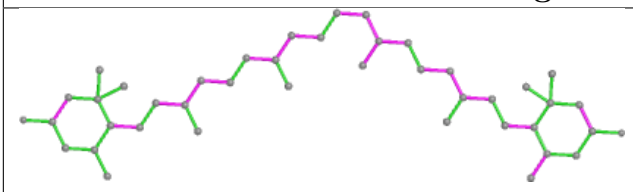


Torsions

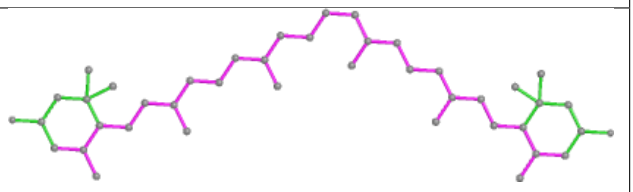


Rings

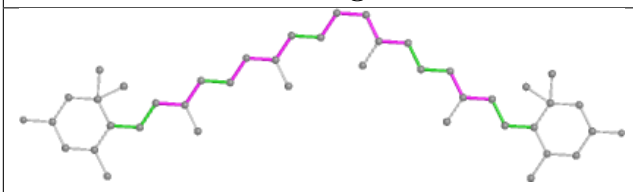
Ligand 5X6 2 314



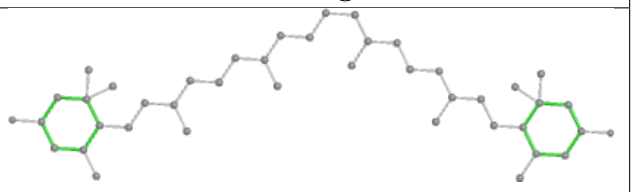
Bond lengths



Bond angles

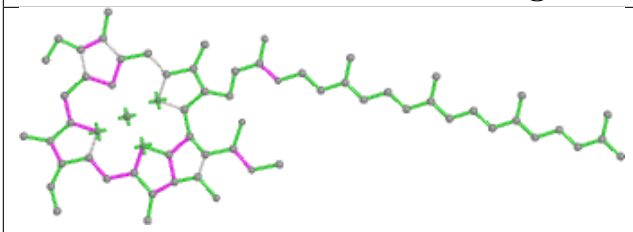


Torsions

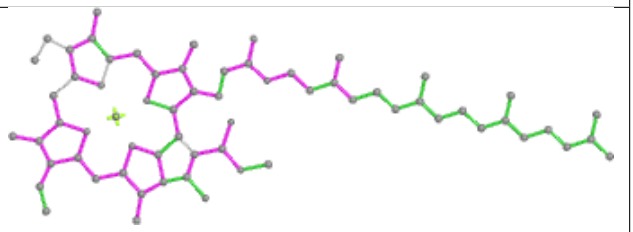


Rings

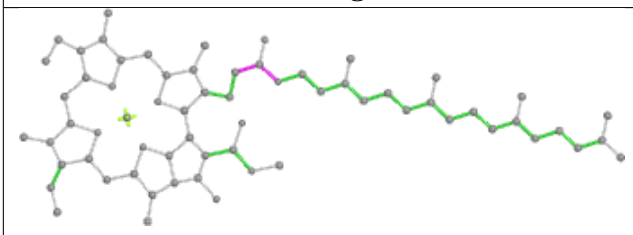
Ligand CL0 A 801



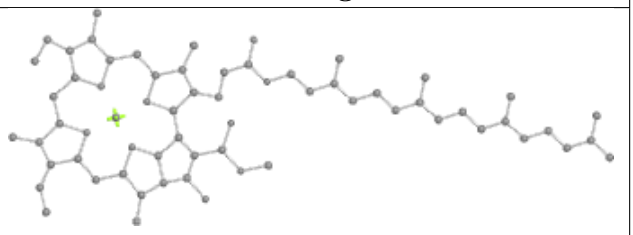
Bond lengths



Bond angles

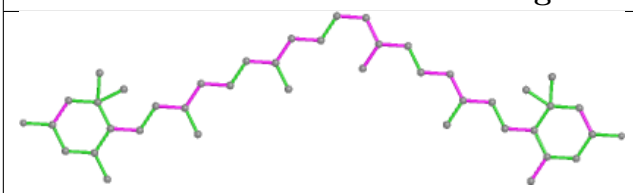


Torsions

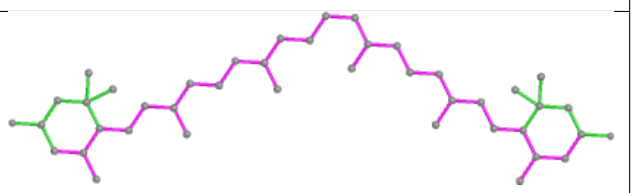


Rings

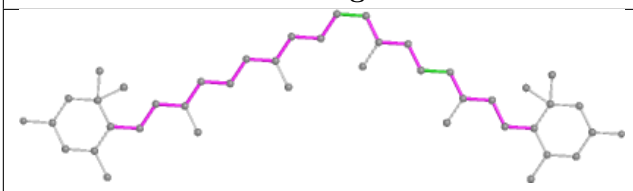
Ligand 5X6 2 312



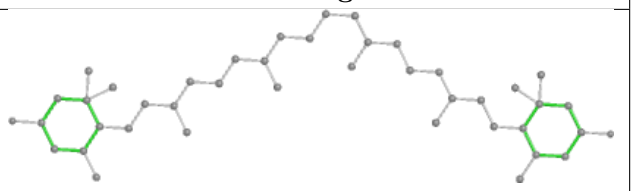
Bond lengths



Bond angles

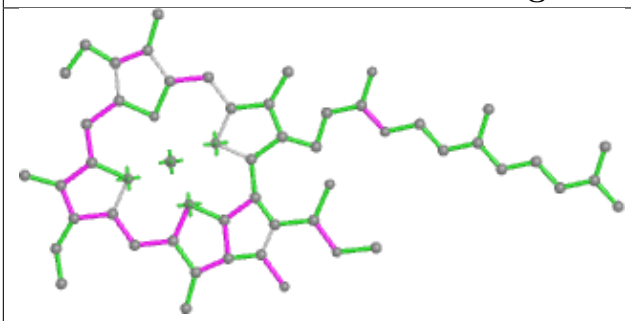


Torsions

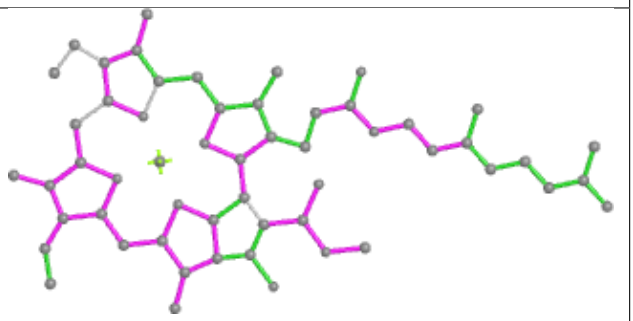


Rings

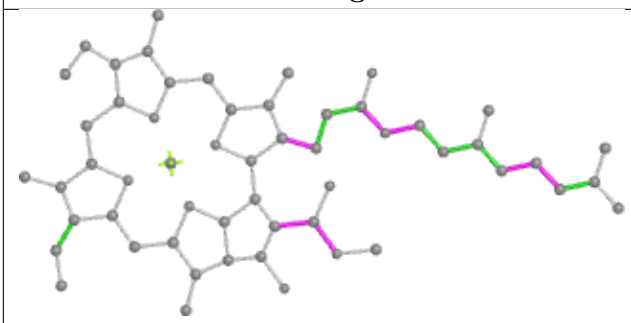
Ligand CLA 3 305



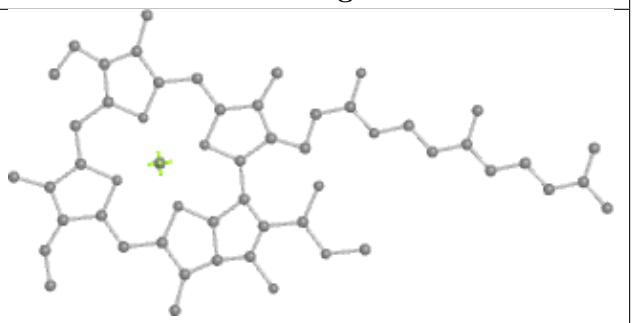
Bond lengths



Bond angles

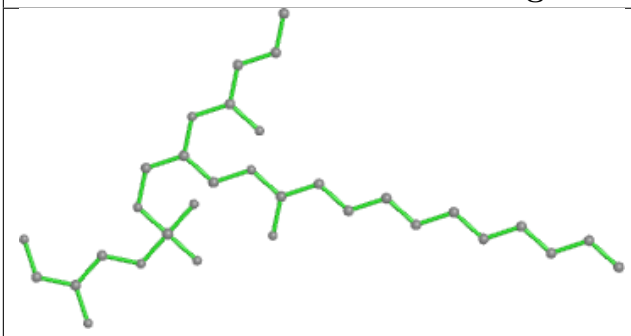


Torsions

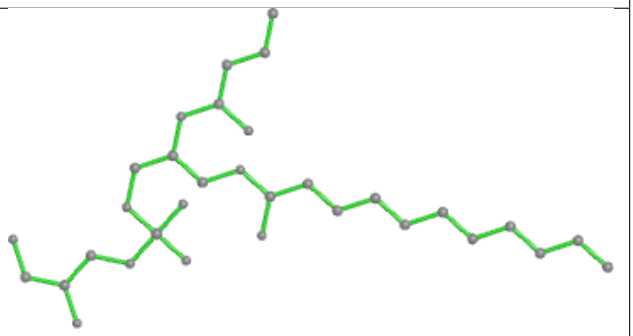


Rings

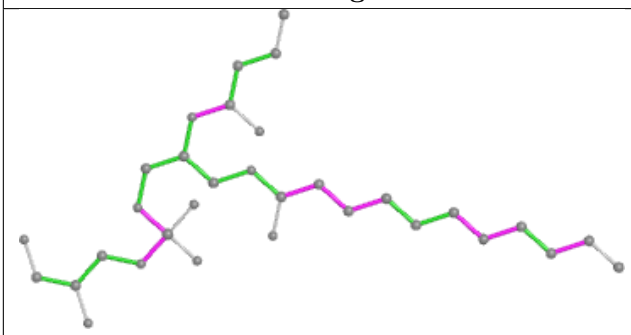
Ligand LHG 4 318



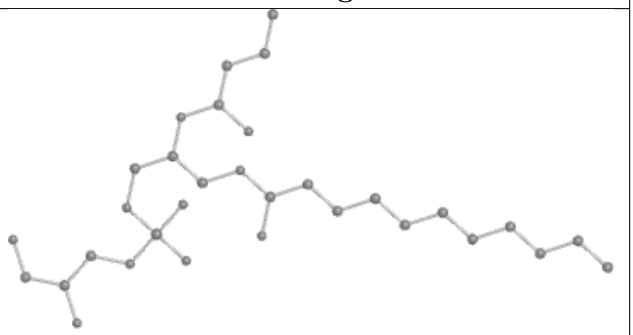
Bond lengths



Bond angles

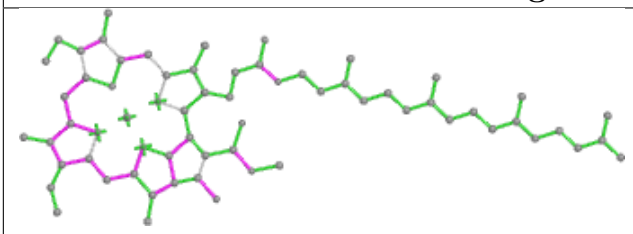


Torsions

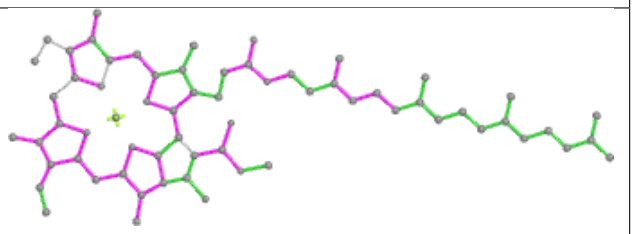


Rings

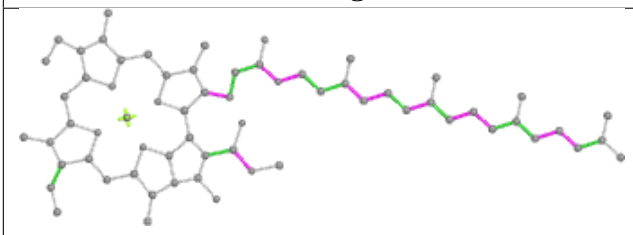
Ligand CLA 1 310



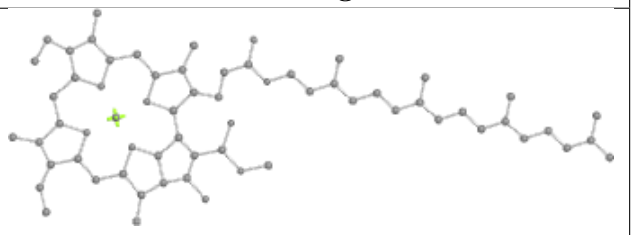
Bond lengths



Bond angles

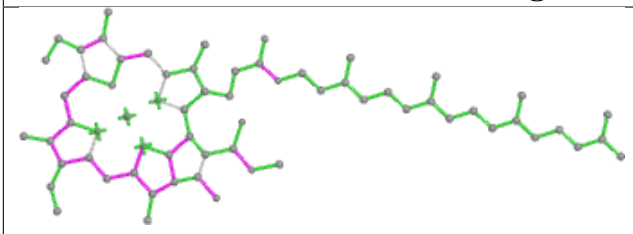


Torsions

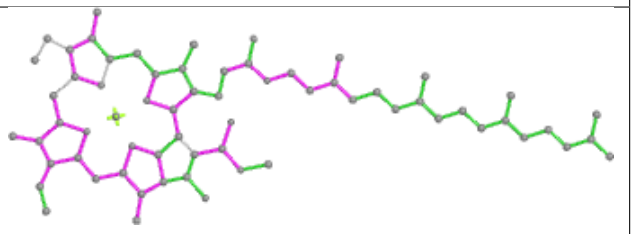


Rings

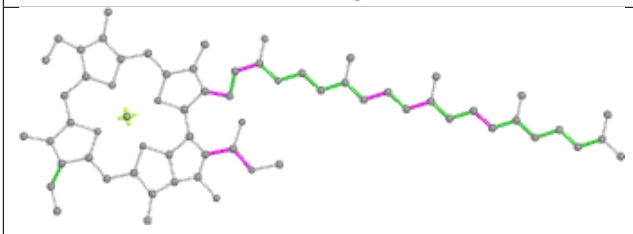
Ligand CLA 3 301



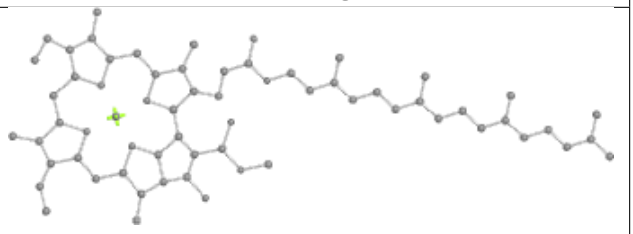
Bond lengths



Bond angles

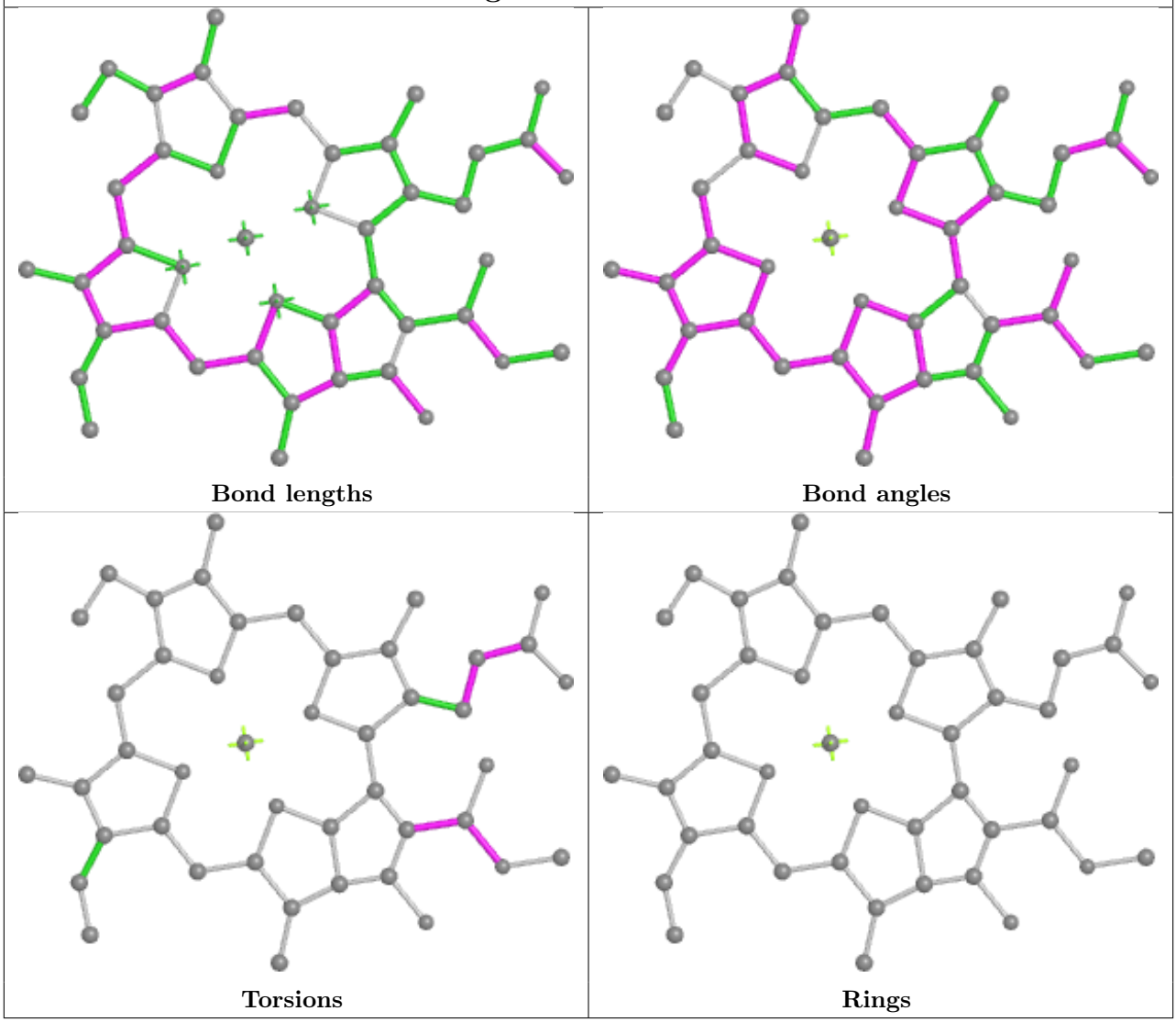


Torsions



Rings

Ligand CLA 2 311



5.7 Other polymers (i)

There are no such residues in this entry.

5.8 Polymer linkage issues (i)

There are no chain breaks in this entry.

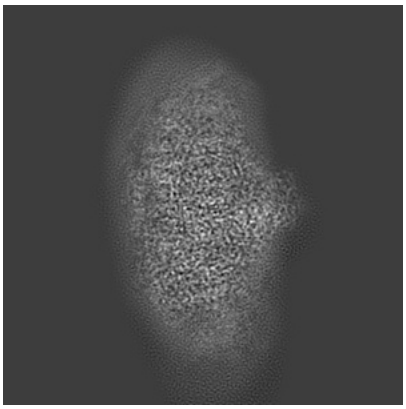
6 Map visualisation

This section contains visualisations of the EMDB entry EMD-62242. These allow visual inspection of the internal detail of the map and identification of artifacts.

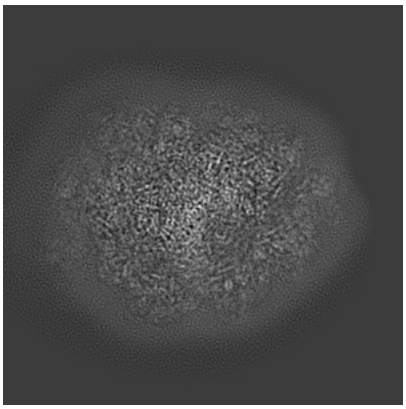
Images derived from a raw map, generated by summing the deposited half-maps, are presented below the corresponding image components of the primary map to allow further visual inspection and comparison with those of the primary map.

6.1 Orthogonal projections

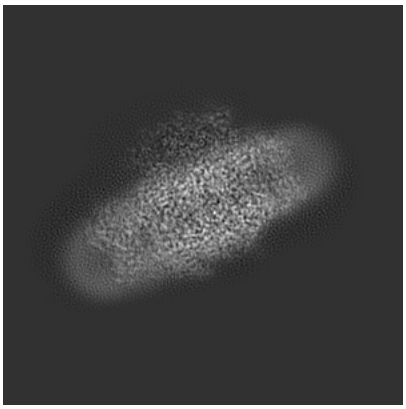
6.1.1 Primary map



X

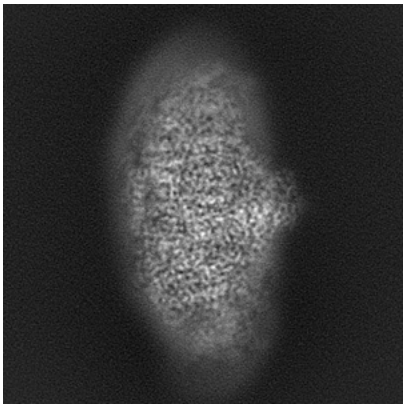


Y

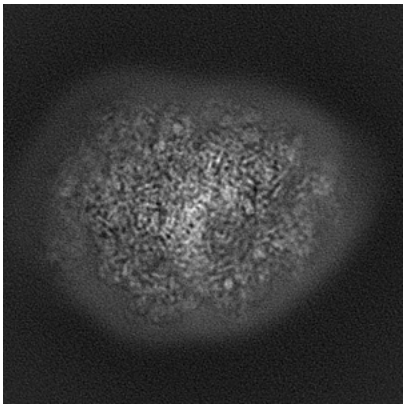


Z

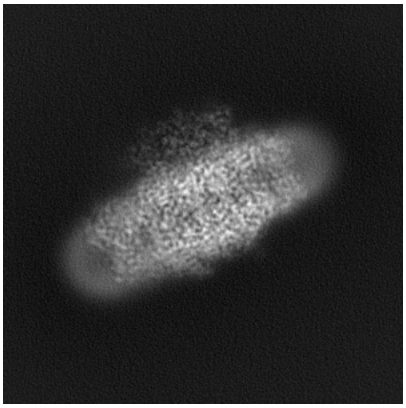
6.1.2 Raw map



X



Y

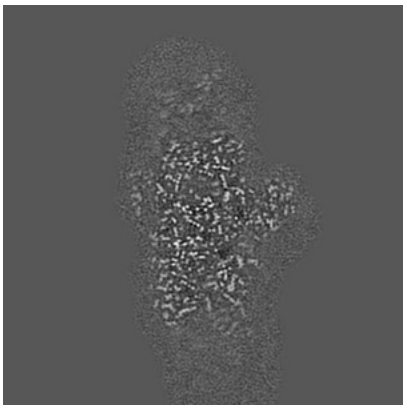


Z

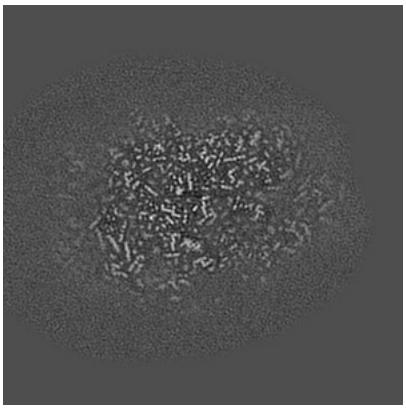
The images above show the map projected in three orthogonal directions.

6.2 Central slices (i)

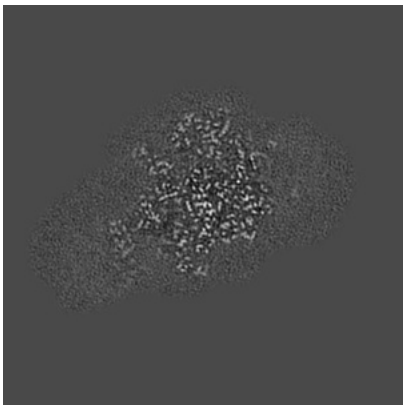
6.2.1 Primary map



X Index: 160

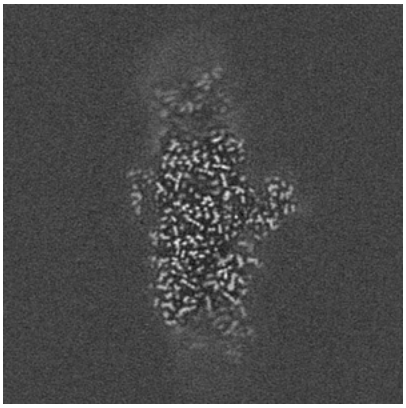


Y Index: 160

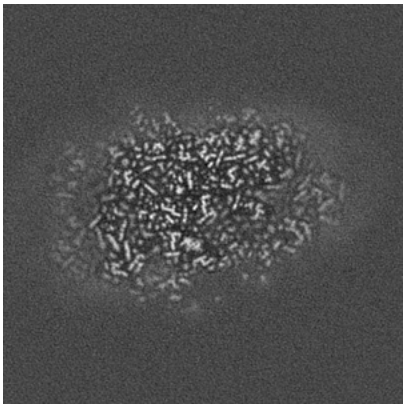


Z Index: 160

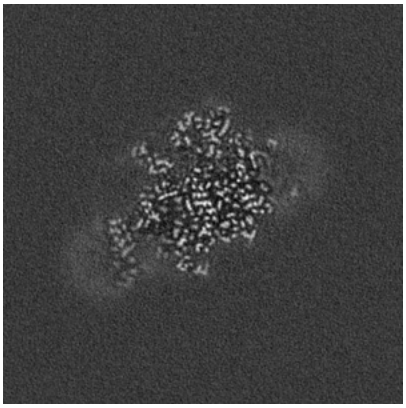
6.2.2 Raw map



X Index: 160



Y Index: 160

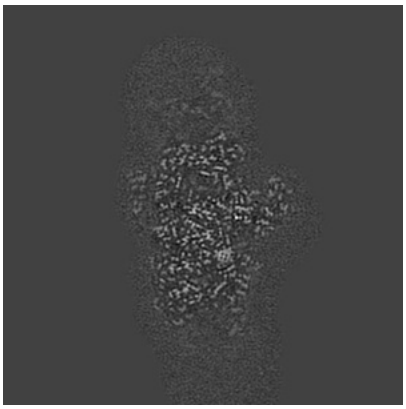


Z Index: 160

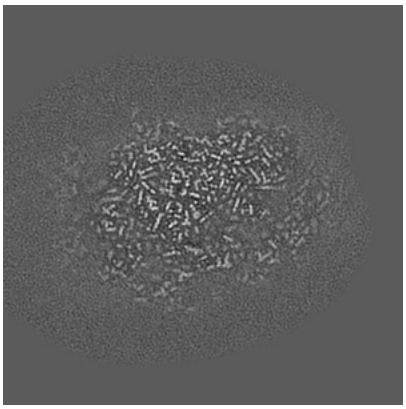
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices (i)

6.3.1 Primary map



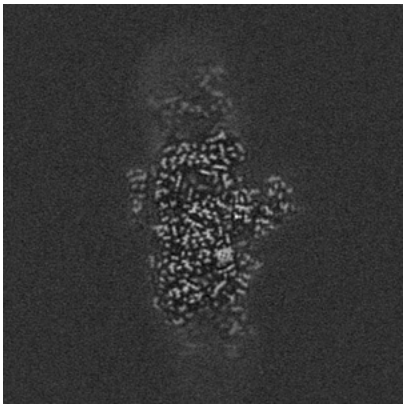
X Index: 158



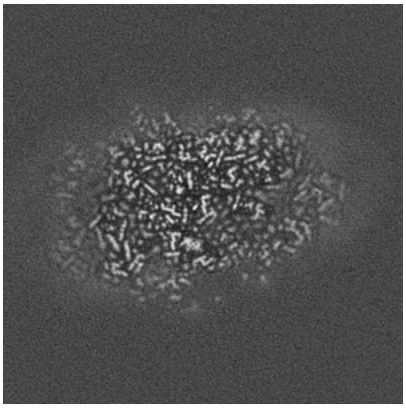
Y Index: 158

Z Index: 147

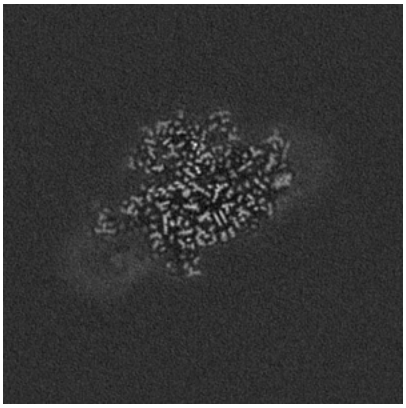
6.3.2 Raw map



X Index: 158



Y Index: 160

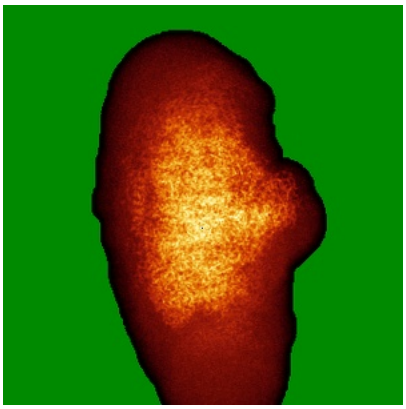


Z Index: 147

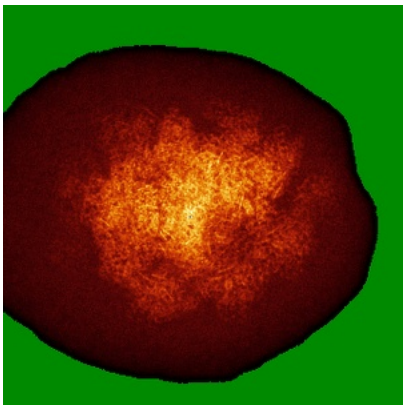
The images above show the largest variance slices of the map in three orthogonal directions.

6.4 Orthogonal standard-deviation projections (False-color) (i)

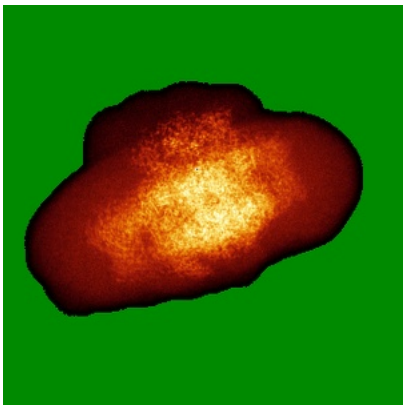
6.4.1 Primary map



X

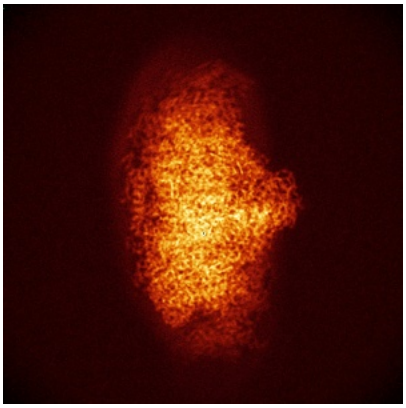


Y

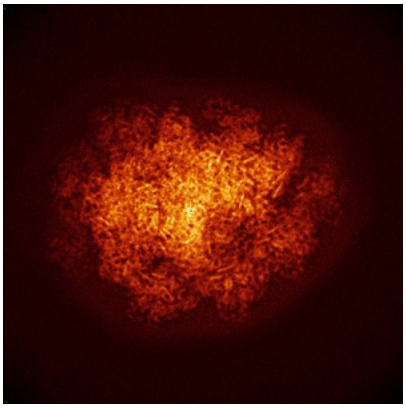


Z

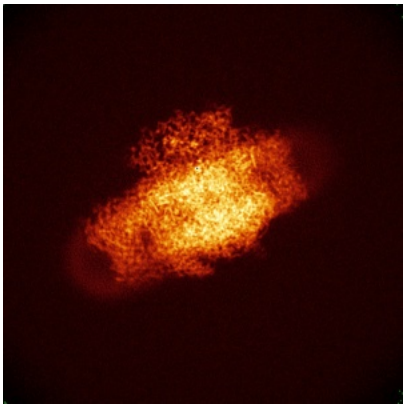
6.4.2 Raw map



X



Y

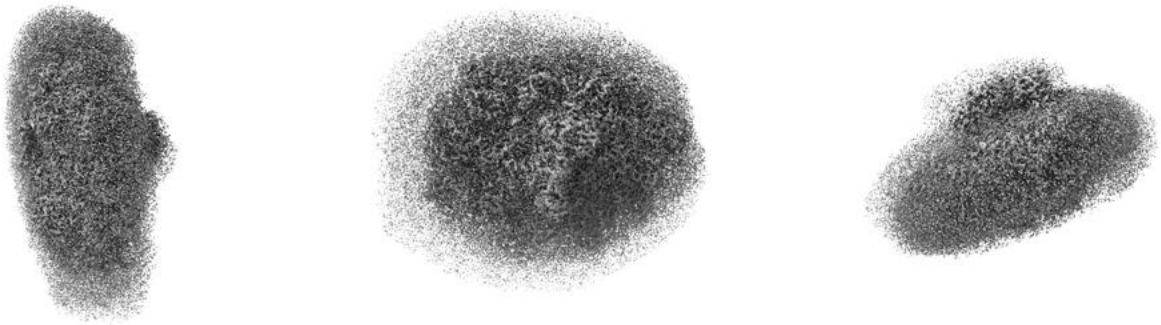


Z

The images above show the map standard deviation projections with false color in three orthogonal directions. Minimum values are shown in green, max in blue, and dark to light orange shades represent small to large values respectively.

6.5 Orthogonal surface views (i)

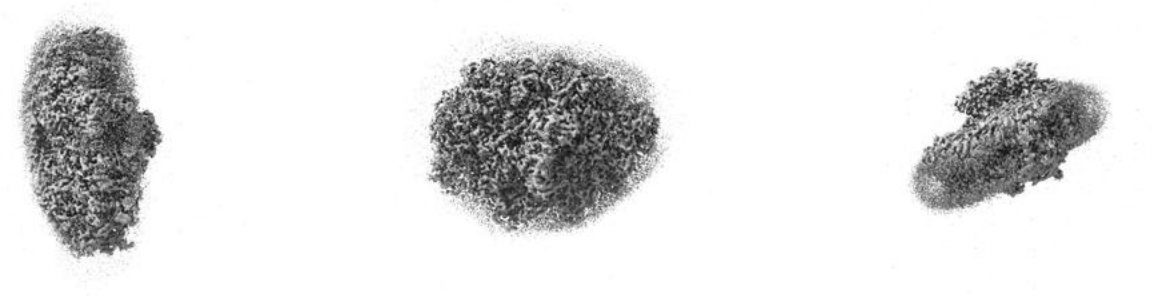
6.5.1 Primary map



X Y Z

The images above show the 3D surface view of the map at the recommended contour level 0.011. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

6.5.2 Raw map



X Y Z

These images show the 3D surface of the raw map. The raw map's contour level was selected so that its surface encloses the same volume as the primary map does at its recommended contour level.

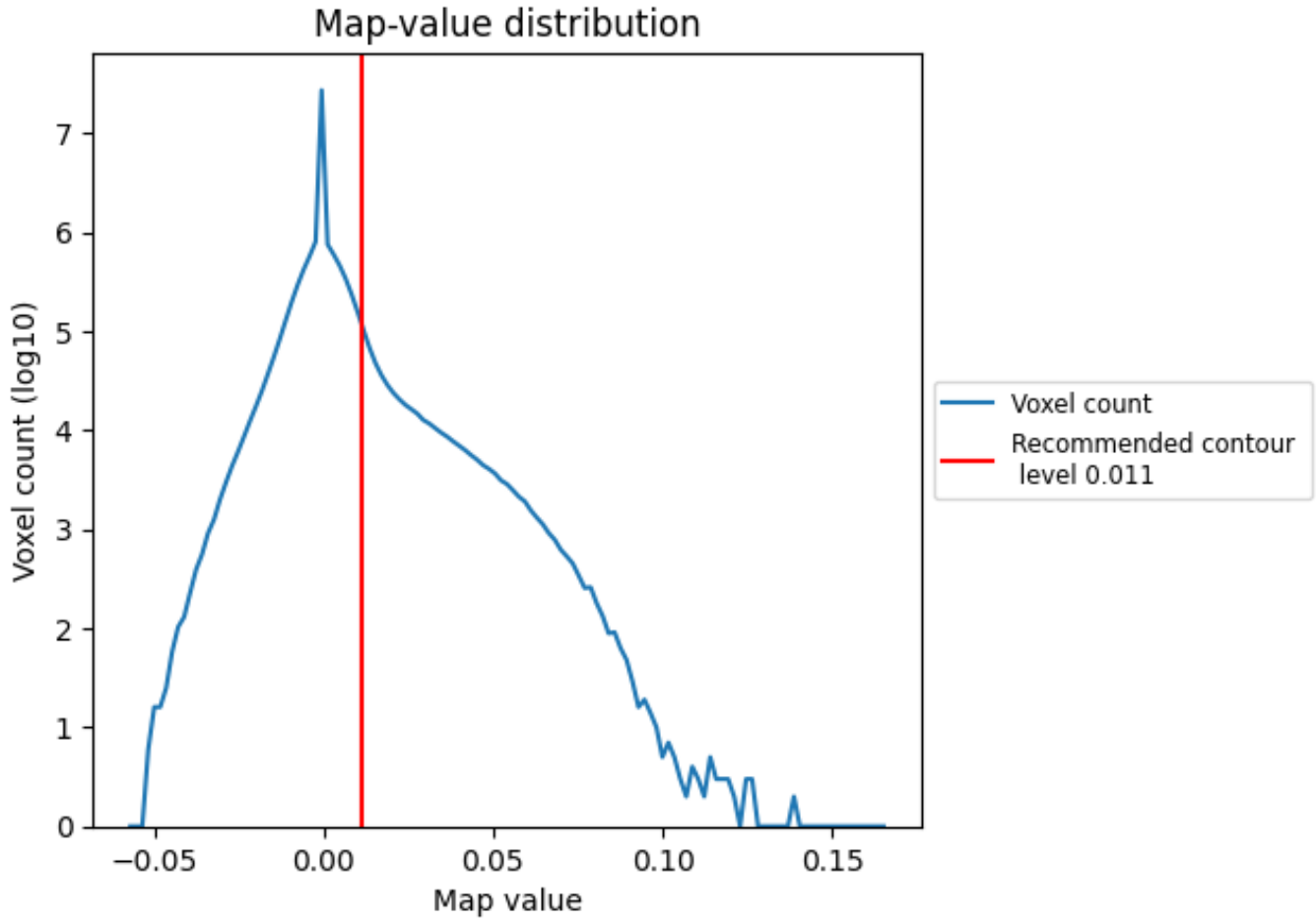
6.6 Mask visualisation (i)

This section was not generated. No masks/segmentation were deposited.

7 Map analysis

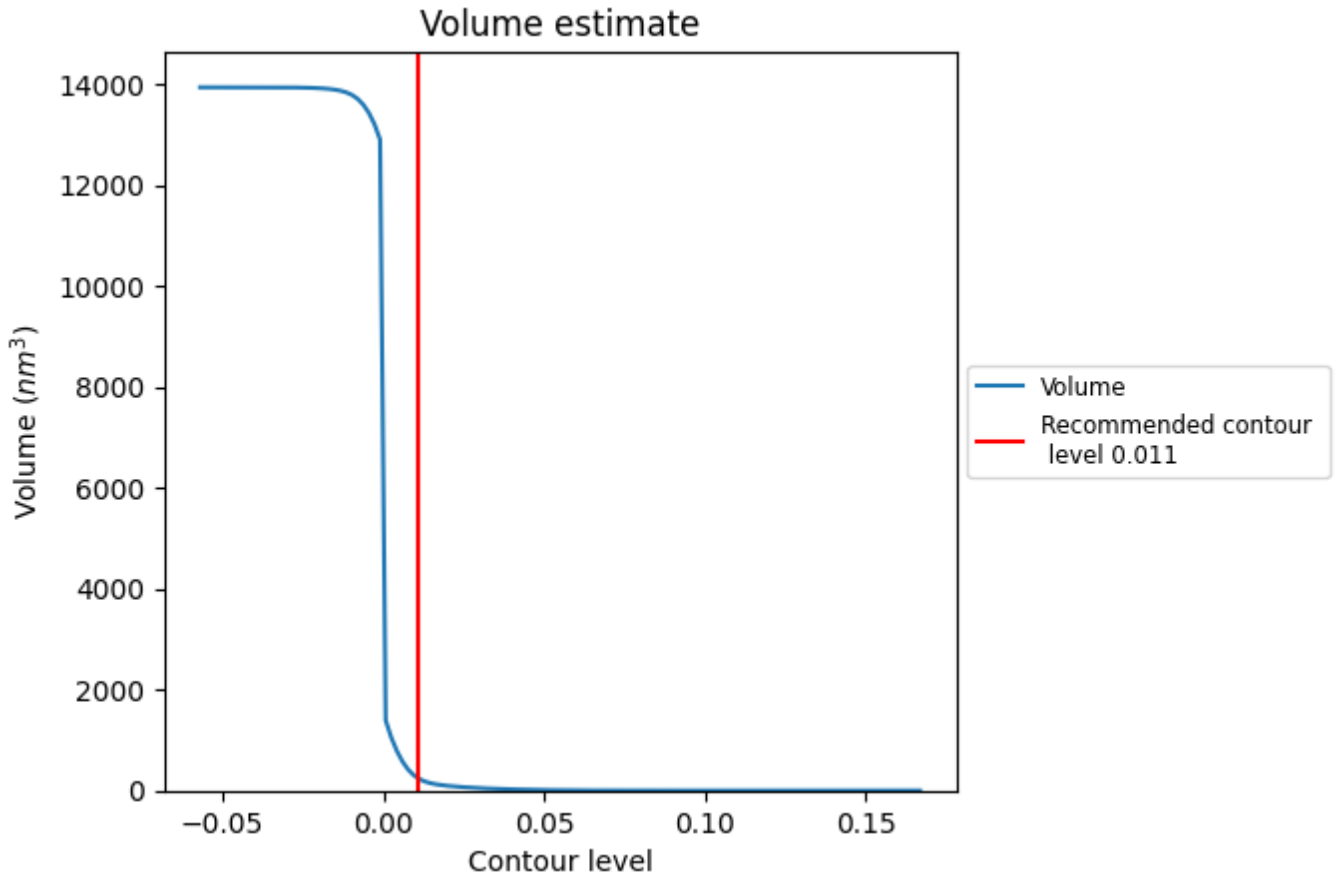
This section contains the results of statistical analysis of the map.

7.1 Map-value distribution



The map-value distribution is plotted in 128 intervals along the x-axis. The y-axis is logarithmic. A spike in this graph at zero usually indicates that the volume has been masked.

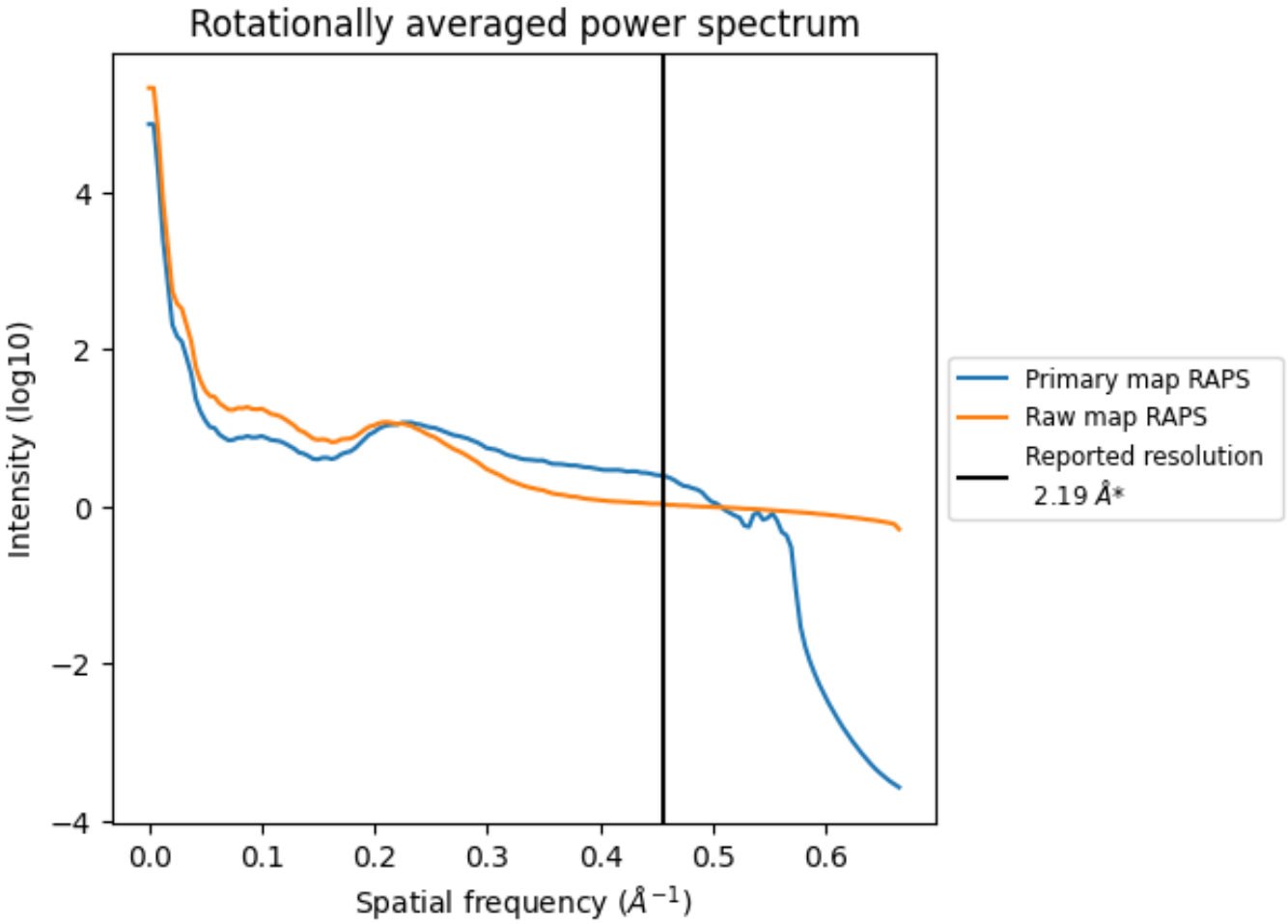
7.2 Volume estimate (i)



The volume at the recommended contour level is 238 nm^3; this corresponds to an approximate mass of 215 kDa.

The volume estimate graph shows how the enclosed volume varies with the contour level. The recommended contour level is shown as a vertical line and the intersection between the line and the curve gives the volume of the enclosed surface at the given level.

7.3 Rotationally averaged power spectrum (i)

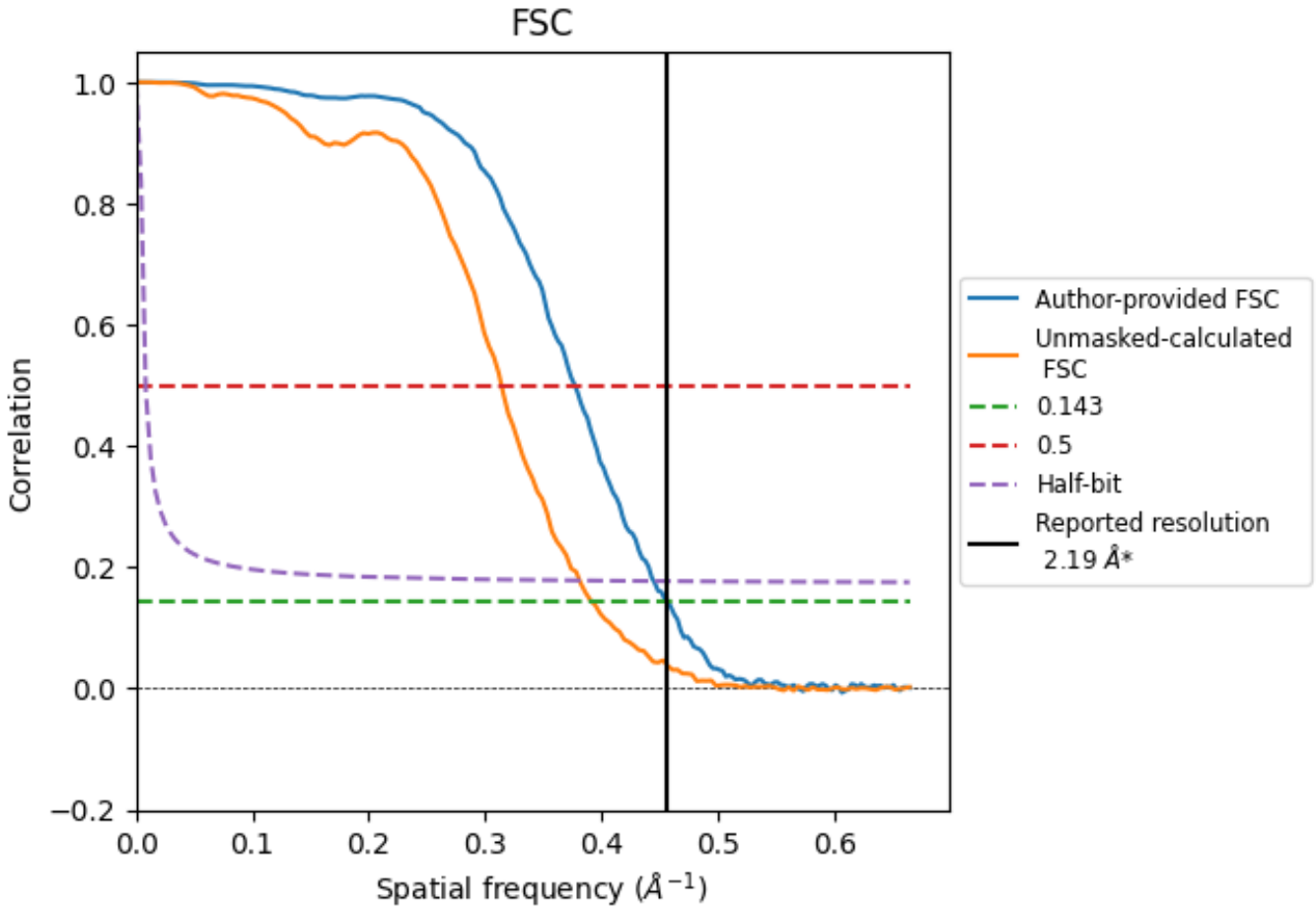


*Reported resolution corresponds to spatial frequency of 0.457 Å^{-1}

8 Fourier-Shell correlation

Fourier-Shell Correlation (FSC) is the most commonly used method to estimate the resolution of single-particle and subtomogram-averaged maps. The shape of the curve depends on the imposed symmetry, mask and whether or not the two 3D reconstructions used were processed from a common reference. The reported resolution is shown as a black line. A curve is displayed for the half-bit criterion in addition to lines showing the 0.143 gold standard cut-off and 0.5 cut-off.

8.1 FSC



*Reported resolution corresponds to spatial frequency of 0.457 Å^{-1}

8.2 Resolution estimates (i)

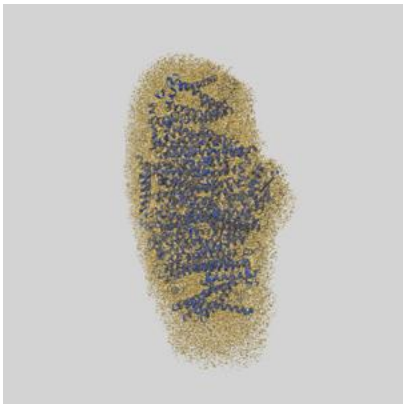
Resolution estimate (Å)	Estimation criterion (FSC cut-off)		
	0.143	0.5	Half-bit
Reported by author	2.19	-	-
Author-provided FSC curve	2.19	2.65	2.24
Unmasked-calculated*	2.55	3.18	2.62

*Resolution estimate based on FSC curve calculated by comparison of deposited half-maps. The value from deposited half-maps intersecting FSC 0.143 CUT-OFF 2.55 differs from the reported value 2.19 by more than 10 %

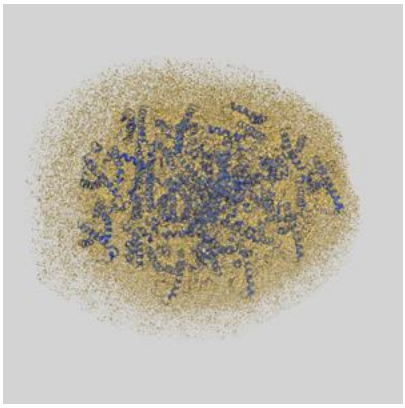
9 Map-model fit

This section contains information regarding the fit between EMDB map EMD-62242 and PDB model 9KC5. Per-residue inclusion information can be found in section 3 on page 30.

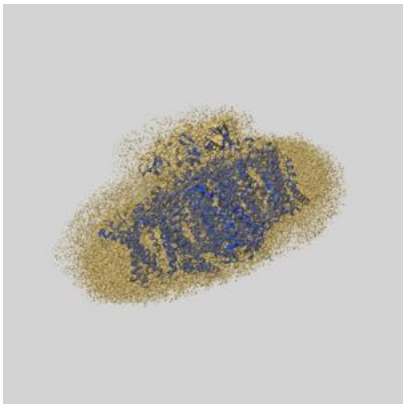
9.1 Map-model overlay



X



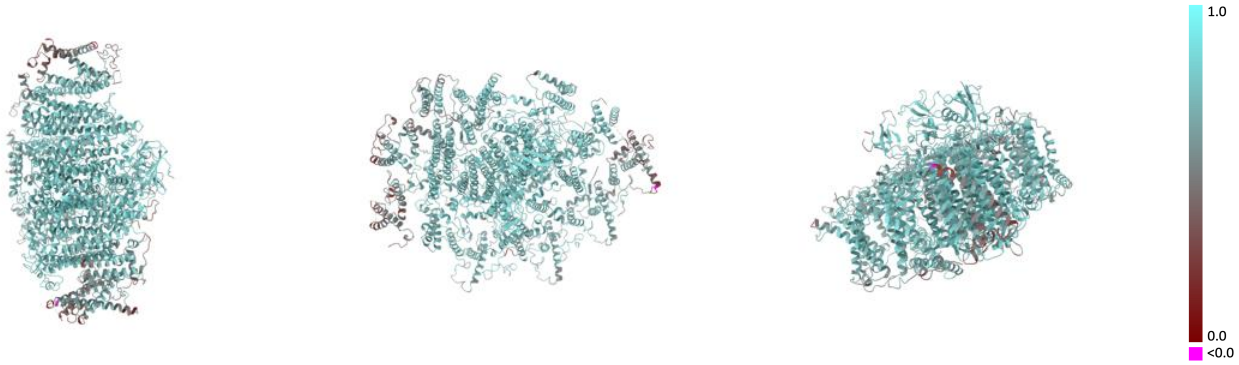
Y



Z

The images above show the 3D surface view of the map at the recommended contour level 0.011 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

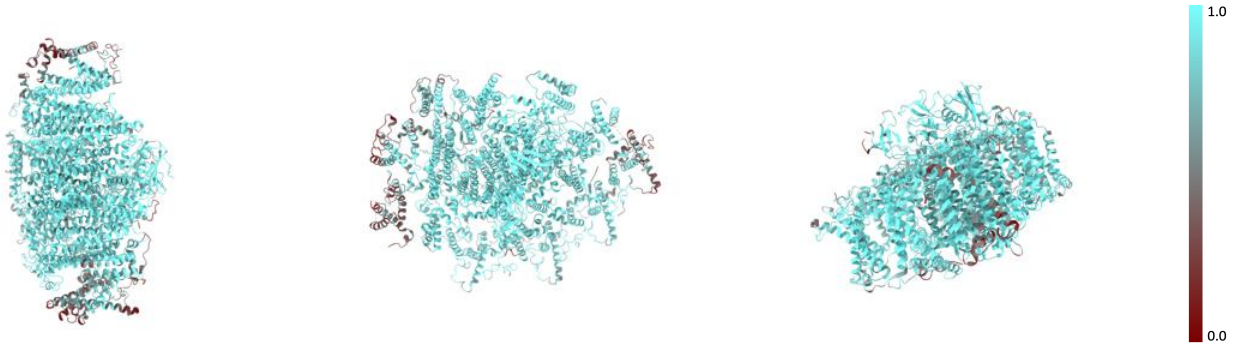
9.2 Q-score mapped to coordinate model (i)



X Y Z

The images above show the model with each residue coloured according its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions at which atoms can be resolved. Low Q-score values may therefore be expected for many entries.

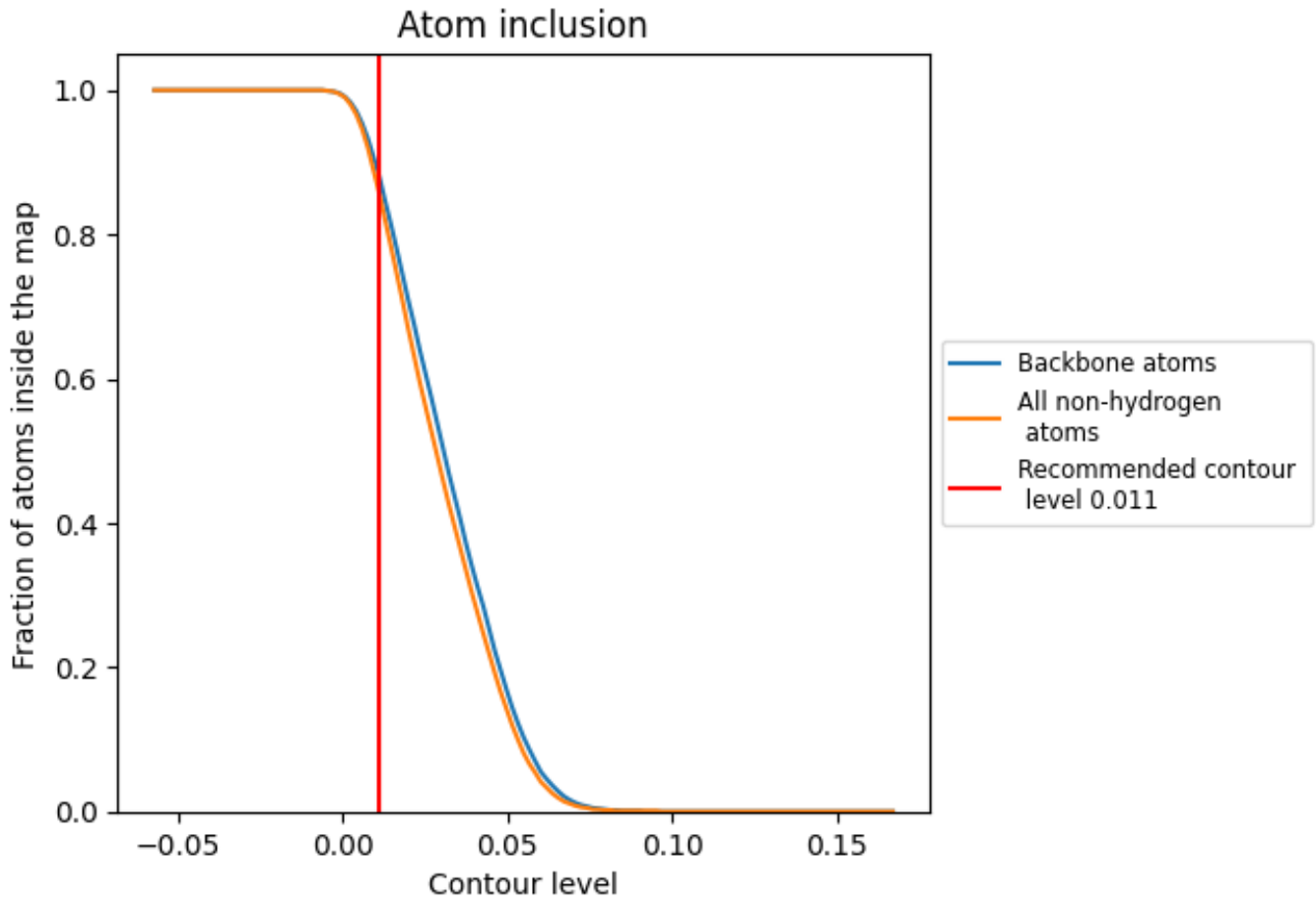
9.3 Atom inclusion mapped to coordinate model (i)



X Y Z

The images above show the model with each residue coloured according to its atom inclusion. This shows to what extent they are inside the map at the recommended contour level (0.011).

9.4 Atom inclusion (i)



At the recommended contour level, 88% of all backbone atoms, 86% of all non-hydrogen atoms, are inside the map.

9.5 Map-model fit summary

The table lists the average atom inclusion at the recommended contour level (0.011) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	0.8610	0.6870
1	0.7200	0.6010
2	0.5950	0.5410
3	0.3740	0.4350
4	0.8710	0.6700
5	0.8700	0.6590
6	0.8630	0.6520
7	0.5370	0.4840
A	0.9510	0.7560
B	0.9530	0.7560
C	0.9900	0.7830
D	0.9280	0.7280
E	0.8640	0.6980
F	0.9240	0.7260
I	0.8890	0.6970
J	0.9190	0.7140
K	0.8370	0.6510
L	0.8750	0.6870
M	0.7980	0.6310
O	0.8420	0.6600
Z	0.9320	0.7120